HISTORY

Model Name : 6558-03N /03S/43N/43S
SERVICE MANUAL
Part No. : 9-978-610-01

When clicking an item, it's detail is displayed.

Date	SUP/COR No.	Description of SUP/COR	Change of main text
1998.03	COR-1	Correction of different color parts missing from parts list.	Yes

6558-03N/03S/43N/43S

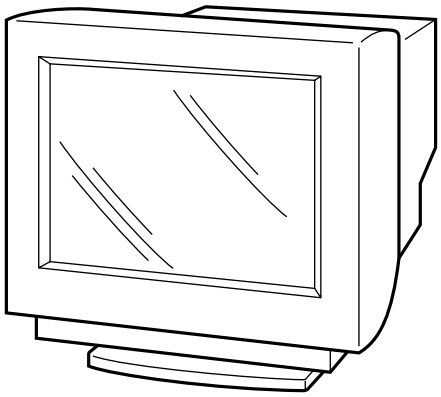
SERVICE MANUAL

6558-03N/43N

US Model
Canadian Model
AEP Model
Japan Model

6558-03S/43S

S. Hemisphere Model



N3 CHASSIS

SPECIFICATIONS

Picture tube	0.25 – 0.27 mm aperture grille pitch 21 inches measured diagonally 90-degree deflection
Viewable image size	Approx. 403.8 × 302.2 mm (w/h) (16 × 12 inches) 19.8″ viewing image
Resolution	Horizontal: Max. 1600 dots Vertical: Max. 1200 lines
Standard image area	Approx. 388 × 291 mm (w/h) (15 3/8 × 11 1/2 inches) or Approx. 364 × 291 mm (w/h) (14 3/8 × 11 1/2 inches)
Deflection frequency	Horizontal: 30 to 107 kHz Vertical: 50 to 160 Hz 256 < Total Line < 2048
AC input voltage/current	100 to 240 V, 50 – 60 Hz, 2.0 – 1.0 A
Power consumption	Max. 160 W
Dimensions	498 × 513 × 500 mm (w/h/d) (19 5/8 × 20 1/4 × 19 3/4 inches)
Mass	Approx. 31 kg (68 lb 5 oz)

Design and specifications are subject to change without notice.

MODEL	SPEC.	
	BODY COLOR	DEST.
6558-03N	WHITE TYPE	U/C, AEP, J
6558-03S		SH
6558-43N	BLACK TYPE	U/C, AEP, J
6558-43S		SH

COLOR MONITOR

IBM®

SAFETY CHECK-OUT
(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.

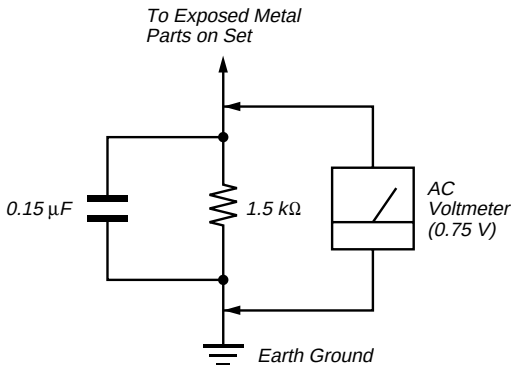


Fig. A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers).

Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

WARNING!!

NEVER TURN ON THE POWER IN A CONDITION IN WHICH THE DEGAUSS COIL HAS BEEN REMOVED.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

AVERTISSEMENT!!

NE JAMAIS METTRE SOUS TENSION QUAND LA BOBINE DE DEMAGNETISATION EST ENLEVÉE.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SONT CRITIQUES POUR LA SÉCURITÉ. NE LES REMPLACER QUE PAR UNE PIÈCE PORTANT LE NUMÉRO SPECIFIÉ. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNE-MENT EST SUSPECTÉ.

POWER SAVING FUNCTION

This monitor meets the power-saving guidelines set by VESA and Energy Star, as well as the more stringent NUTEK .
If the monitor is connected to a computer or video graphics board that is VESA DPMS (Display Power Management Signaling) compliant, the monitor will automatically reduce power consumption in three stages as shown below.
You can set the delay time before the monitor enters the power saving mode using the OSD. Set the time according to "Setting the power saving delay time" on page 13.

Note

If no video signal is input to the monitor, the "NO INPUT SIGNAL" message (page 16) appears. After the delay time has passed, the power saving function automatically puts the monitor into the active-off mode and the ⏻ indicator lights up orange. Once the horizontal and vertical sync signals are detected, the monitor automatically resumes its normal operation mode.

	Power consumption mode	Screen	Horizontal sync signal	Vertical sync signal	Power consumption	Recovery time	⏻ indicator
1	Normal operation	active	present	present	≤ 160 W	—	Green
2	Standby (1st mode)	blank	absent	present	≤ 100 W	Approx. 3 sec.	Green and orange alternate
3	Suspend (2nd mode)	blank	present	absent	≤ 15 W	Approx. 3 sec.	Green and orange alternate
4	Active-off (3rd mode)	blank	absent	absent	< 5 W	Approx. 10 sec.	Orange
5	Power-off	—	—	—	0 W	—	Off

DIAGNOSIS

Failre	Power LED
+B failure	Orange → Off (0.5 sec) (0.5 sec)
Horizontal / Vertical Deflection failure, Thermal protector	Orange → Off (1.5 sec) (0.5 sec)
ABL protector	Orange → Off (0.5 sec) (1.5 sec)
HV failure	Orange → Off → Orange → Off (0.25 sec) (0.5 sec) (0.25 sec) (1.25 sec)
Aging / Self Test	Orange → Off → Green → Off (0.5 sec) (0.5 sec) (0.5 sec) (0.5 sec)

Aging Mode (Video Aging) : During Power Save, press "MENU" key for longer than 2 second.
Self Test (OSD Color Bar) : During Power Save, press "CONTRAST" + (➡) key for longer than 2 second.
Reliability Check Mode : During Power Save, press "CONTRAST" – (⬅) key for longer than 2 second.

TIMING SPECIFICATION

MODE								TEST MODE
MODE AT PRODUCTION	MODE 1	MODE 2	MODE 3	MODE 4	MODE 5	MODE 6	MODE 7	MODE 8
RESOLUTION	656 X 496	640 X 480	800 X 600	1024 X 768	1280 X 1024	1280 X 1024	1600 X 1200	1600 X 1200
CLOCK	25.175 MHZ	36.000 MHZ	56.250 MHZ	94.500 MHZ	135.000 MHZ	157.500 MHZ	202.500 MHZ	229.500 MHZ
— HORIZONTAL —								
H-FREQ	31.469 kHz	43.269 kHz	53.674 kHz	68.677 kHz	79.976 kHz	91.146 kHz	93.750 kHz	106.250 kHz
	usec	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	31.778	23.111	18.631	14.561	12.504	10.971	10.667	9.412
H. BLK	5.720	5.333	4.409	3.725	3.022	2.844	2.765	2.440
H. FP	0.318	1.556	0.569	0.508	0.119	0.406	0.316	0.279
H. SYNC	3.813	1.556	1.138	1.016	1.067	1.016	0.948	0.837
H. BP	1.589	2.222	2.702	2.201	1.837	1.422	1.501	1.325
H. ACTIV	26.058	17.778	14.222	10.836	9.481	8.127	7.901	6.972
— VERTICAL —								
V. FREQ(HZ)	59.940 Hz	85.008 Hz	85.061 Hz	84.997 Hz	75.025 Hz	85.024 Hz	75.000 Hz	85.000 Hz
	lines	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	525	509	631	808	1066	1072	1250	1250
V. BLK	29	29	31	40	42	48	50	50
V. FP	2	1	1	1	1	1	1	1
V. SYNC	2	3	3	3	3	3	3	3
V. BP	25	25	27	36	38	44	46	46
V. ACTIV	496	480	600	768	1024	1024	1200	1200
— SYNC —								
INT(G)	NO	NO	NO	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES N/N	YES P/P	YES P/P	YES P/P	YES P/P	YES P/P	YES P/P
EXT(CS) /POLARITY	NO	NO	NO	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

97.12.10 VER.

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Note: Hand degauss must be used on stand-by or power-off condition.
This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

SECTION 1
GENERAL

Precautions

Installation

- Prevent internal heat build-up by allowing adequate air circulation. Do not place the monitor on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the monitor near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Do not place the monitor near equipment which generates magnetism, such as a transformer or high voltage power lines.

Maintenance

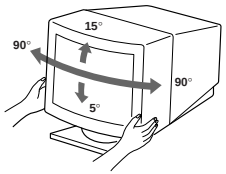
- Clean the cabinet, panel and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent, such as alcohol or benzine.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items such as a ballpoint pen or screwdriver. This type of contact may result in a scratched picture tube.

Transportation

When you transport this monitor for repair or shipment, use the original carton and packing materials.

Use of the Tilt-Swivel

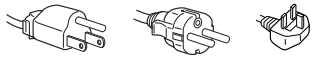
With the tilt-swivel, this monitor can be adjusted to the desired angle within 180° horizontally and 20° vertically. To turn the monitor vertically and horizontally, hold it at the bottom with both hands as illustrated below.



Warning on power connection

- Use an appropriate power cord for your local power supply.

Examples of plug types



for 100 to 120 V AC | for 200 to 240 V AC | for 240 V AC only

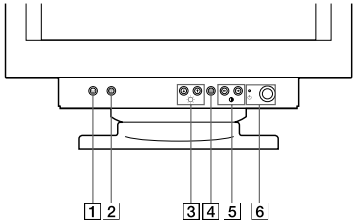
- Before disconnecting the power cord, wait at least 30 seconds after turning off the power to allow the static electricity on the CRT display surface to discharge.
- After the power has been turned on, the CRT is demagnetized (degaussed) for about 3 seconds. This generates a strong magnetic field around the metal frame, which may affect the data stored on magnetic tapes and disks near the bezel. Place magnetic recording equipment, tapes and disks away from this monitor.

The outlet should be installed near the equipment and be easily accessible.

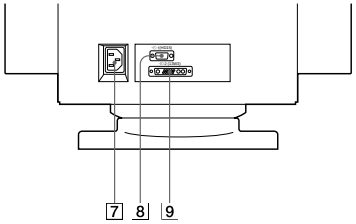
Identifying Parts and Controls

See the pages in parentheses for further details.

Front



Rear



1 **(reset) button (page 14)**
Resets the adjustments to the factory settings.

2 **(auto sizing and centering) button (page 5)**
Automatically adjusts the size and centering of the images.

3 **(brightness) (↓/↑) buttons (pages 5 – 14)**
Adjust the picture brightness.

Function as the (↓/↑) buttons when adjusting other items.

4 **(menu) button (pages 5 – 14)**
Displays the MENU OSD.

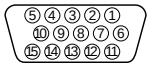
5 **(contrast) (←/→) buttons (pages 5 – 14, 18)**
Adjust the contrast.

Function as the (←/→) buttons when adjusting other items.

6 **(power) switch and indicator (pages 15, 18)**
Turns the monitor on or off.
The indicator lights up in green when the monitor is turned on, and lights up in orange when the monitor is in power saving mode.

7 **AC IN connector**
Provides AC power to the monitor.

8 **Video input 1 connector (HD15)**
Inputs RGB video signals (0.700 Vp-p, positive) and SYNC signals.



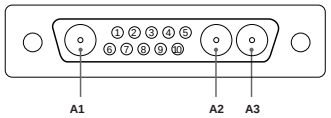
Pin No.	Signal	Pin No.	Signal
1	Red	8	Blue Ground
2	Green (Composite Sync on Green)	9	DDC + 5V*
		10	Ground
		11	ID (Ground)
3	Blue	12	Bi-Directional Data (SDA)*
4	ID (Ground)		
5	DDC Ground*	13	H. Sync
6	Red Ground	14	V. Sync
7	Green Ground	15	Data Clock(SCL)*

* Display Data Channel (DDC) Standard of VESA

(continued)

EN

9 Video input 2 connector (13W3 cable)
Inputs RGB video signal (0.700 Vp-p, positive).



Pin No.	Signal	Pin No.	Signal
A1	Red Video & Ground	4	Ground
		5	C.Sync*
A2	Green Video & Ground	6	—
		7	Bi-Directional Data (SDA)**
A3	Blue Video & Ground		
		8	DDC + 5V**
1	—	9	V.Sync
2	Data Clock (SCL)**	10	Ground
3	—		

* Pins serve a dual purpose as combined sync input and as H.sync input if V.Sync is present on pin no. 9.
** Display Data Channel (DDC) Standard by VESA

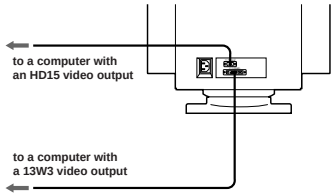
Note
If you use a computer or video board of high output level (about 1.0 Vp-p), you may not be able to obtain the optimum display. In such case, try decreasing the picture contrast, or use a computer or video board with a lower output level.

Setup

This monitor works with platforms running at horizontal frequencies between 30 and 107 kHz.

Step 1: Connect the monitor to the computer

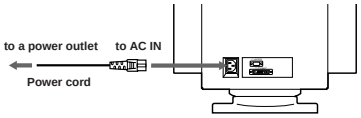
With the computer switched off, connect the video signal cable to the video output of the computer.



Note
Do not short the pins of the video signal cable.

Step 2: Connect the power cord

With the monitor switched off, connect one end of the proper power cord for your local supply to the monitor and the other end to a power outlet.



Step 3: Turn on the monitor and computer

The installation of your monitor is complete.

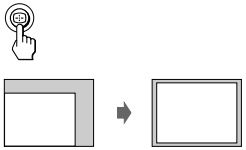
Note
If "OUT OF SCAN RANGE" or "NO INPUT SIGNAL" appears on the screen, see "Warning Messages" on page 16.

Automatically Adjusting the Size and Centering of the Picture

By pressing the ⊖ button, the size and centering of the picture are automatically adjusted to fit the screen.

1 Turn on the monitor and computer.

2 Press the ⊖ button.
The picture is adjusted to fit the center of the screen.



Notes
- This function is intended for use with a computer running graphic user interface software that provides a full-screen picture. It may not work properly if the background color is dark or if the input picture does not fill the screen to the edges.
- The screen may go blank for a few seconds while performing the auto-sizing function. This is not a malfunction.
- Although the signals for picture aspect ratio 5:4 (resolution: 1280 × 1024) do not fill the screen to the edges, the picture is accurately displayed.

Selecting the On-screen Display Language

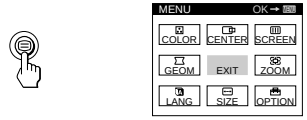
If you need to change the OSD language, see "Using the LANG (Language) On-screen Display" on page 14.
The default setting is English.

Selecting the Input Signal

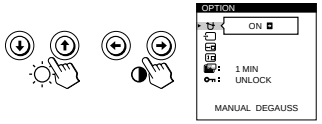
This monitor has two signal input connectors (HD15 and 13W3) and can be connected to two computers simultaneously. Select the input signal you want to view as follows.

1 Turn on the monitor and both computers.

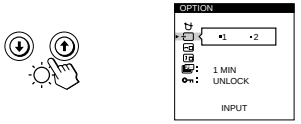
2 Press the ⊜ button.
The MENU OSD appears.



3 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the ⊜ button again.
The OPTION OSD appears.



4 Press the ☼↓/↑ buttons to select " (INPUT)."



(continued)

5 **Press the ◑⬅/➡ buttons to select "1" or "2."**

When "1" is selected
The signal from the computer connected to the HD15 connector is input to the monitor.

When "2" is selected
The signal from the computer connected to the 13W3 connector is input to the monitor.

The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

For more information on using the OSD, see "Introducing the On-screen Display System" on page 7.

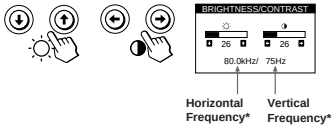
When you connect computers to both connectors
If you restart the computer you want to view, or that computer is in power saving mode, the monitor may automatically select the other connector's signal. This is because the monitor switches from the interrupted signal to the constant signal. If this happens, manually select the desired signal.

Before adjusting
- Connect the monitor and the computer, and turn them on.
- Select "🅰 LANG" in the MENU OSD, then select "ENGLISH" (see page 14).

Adjusting the Picture Brightness and Contrast

Once the setting is adjusted, it will be stored in memory for all input signals received.

1 **Press the ☼ (brightness) ⬇/⬆ or ◑ (contrast) ⬅/➡ buttons.**
The BRIGHTNESS/CONTRAST OSD appears.



2 **For brightness adjustment**
Press the ☼⬇/⬆ buttons.

⬆ . . . for more brightness
⬇ . . . for less brightness

For contrast adjustment
Press the ◑⬅/➡ buttons.

➡ . . . for more contrast
⬅ . . . for less contrast

The OSD automatically disappears after about 3 seconds.

To reset, press the ⇢ (reset) button while the OSD is on. The brightness and contrast are both reset to the factory settings.

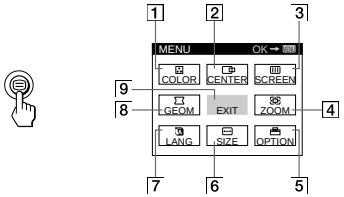
* The horizontal and vertical frequencies for the received input signal appear in the BRIGHTNESS/CONTRAST OSD.

Introducing the On-screen Display System

Most adjustments are made using the MENU OSD.

MENU OSD

Press the ⊜ button to display the MENU OSD.
This MENU OSD contains links to the other OSDs described below.



1 **COLOR**
Displays the COLOR OSD for adjusting the color temperature.

2 **CENTER**
Displays the CENTER OSD for adjusting the centering of the picture.

3 **SCREEN**
Displays the SCREEN OSD for adjusting the vertical and horizontal convergence, etc.

4 **ZOOM**
Displays the ZOOM OSD for enlarging and reducing the picture.

5 **OPTION**
Displays the OPTION OSD for adjusting the OSD position and degaussing the screen, etc.

6 **SIZE**
Displays the SIZE OSD for adjusting the picture size.

7 **LANG**
Displays the LANGUAGE OSD for selecting the language.

8 **GEOM**
Displays the GEOMETRY OSD for adjusting the picture rotation and pincushion, etc.

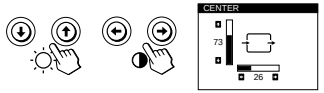
9 **EXIT**
Closes the MENU OSD.

Using the CENTER On-screen Display

The CENTER settings allow you to adjust the centering of the picture.
Once the setting is adjusted, it will be stored in memory for the current input signal.

1 **Press the ⊜ button.**
The MENU OSD appears.

2 **Press the ☼⬇/⬆ and ◑⬅/➡ buttons to select " CENTER," and press the ⊜ button again.**
The CENTER OSD appears.



3 **For horizontal adjustment**
Press the ◑⬅/➡ buttons.

➡ . . . to move the picture right
⬅ . . . to move the picture left

For vertical adjustment
Press the ☼⬇/⬆ buttons.

⬆ . . . to move the picture up
⬇ . . . to move the picture down

The OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

To reset, press the ⇢ (reset) button while the OSD is on. The horizontal and vertical centerings are both reset to the factory settings.

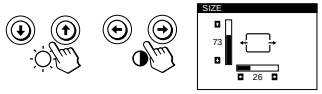
EN

Using the SIZE On-screen Display

The SIZE settings allow you to adjust the size of the picture.
Once the setting is adjusted, it will be stored in memory for the current input signal.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " ⟷ SIZE," and press the ⊜ button again.
The SIZE OSD appears.



3 For horizontal adjustment
Press the ◑←/→ buttons.

→ . . . to increase picture width
← . . . to decrease picture width

For vertical adjustment
Press the ☼↓/↑ buttons.

↑ . . . to increase picture height
↓ . . . to decrease picture height

The OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

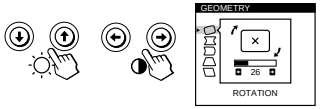
To reset, press the ⇢ (reset) button while the OSD is on.
The horizontal and vertical sizes are both reset to the factory settings.

Using the GEOM (Geometry) On-screen Display

The GEOM (geometry) settings allow you to adjust the shape and orientation of the picture.
Once the rotation is adjusted, it will be stored in memory for all input signals received. All other adjustments will be stored in memory for the current input signal.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " ▱ GEOM," and press the ⊜ button again.
The GEOMETRY OSD appears.



3 Press the ☼↓/↑ buttons to select the item you want to adjust.

Select	To
▱ ROTATION	adjust the picture rotation
▯ PINCUSHION	adjust the picture sides
▱ PIN BALANCE	adjust the picture side balance
▽ KEYSTONE	adjust the picture width
▽ KEY BALANCE	adjust the picture shape balance

4 Press the ◑←/→ buttons to adjust the settings.

For	Press
▱ ROTATION	→ . . . to rotate the picture clockwise ← . . . to rotate the picture counterclockwise
▯ PINCUSHION	→ . . . to expand the picture sides ← . . . to contract the picture sides
▱ PIN BALANCE	→ . . . to move the picture sides to the right ← . . . to move the picture sides to the left
▽ KEYSTONE	→ . . . to increase the picture width at the top ← . . . to decrease the picture width at the top
▽ KEY BALANCE	→ . . . to move the top of the picture to the right ← . . . to move the top of the picture to the left

The OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

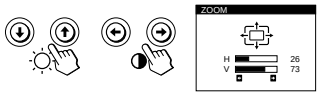
To reset, press the ⇢ (reset) button while the OSD is on.
The selected item is reset to the factory setting.

Using the ZOOM On-screen Display

The ZOOM settings allow you to enlarge or reduce the picture.
Once the setting is adjusted, it will be stored in memory for the current input signal.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " ⊠ ZOOM," and press the ⊜ button again.
The ZOOM OSD appears.



3 Press the ◑←/→buttons to adjust the picture zoom.

→ . . . to enlarge the picture
← . . . to reduce the picture

The OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

To reset, press the ⇢ (reset) button while the OSD is on.

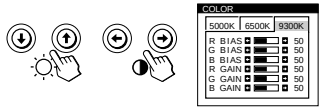
Note
The picture zoom adjustment will stop as soon as either the horizontal or vertical size reaches its maximum or minimum value.

Using the COLOR On-screen Display

You can change the monitor's color temperature. For example, you can adjust or change the colors of a picture on the screen to match the actual colors of the printed picture. Once the setting is adjusted, it will be stored in memory for all input signals received.

1 Press the ⊜ button.
The MENU OSD appears.

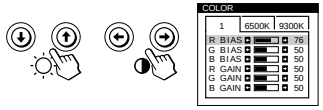
2 Press the ☼↓/↑ and ◑←/→ buttons to select " COLOR," and press the ⊜ button again.
The COLOR OSD appears.



3 Press the ◑←/→ buttons to select the color temperature.

There are three color temperature modes in the OSD.
The preset adjustments are:
5000K, 6500K, 9300K

4 Fine tuning the color temperature
Press the ☼↓/↑ buttons to select an item and adjust by pressing the ◑←/→ buttons.



Select **R (red), G (green), or B (blue) BIAS** to adjust the black level of each color's signal.

Select **R (red), G (green), or B (blue) GAIN** to adjust the white level of each color's signal.

The "5000K," "6500K" or "9300K" disappears and the new color settings are memorized for each of the three color modes.
The color temperature modes change as follows:
5000K→ 1, 6500K→ 2, 9300K→ 3

The OSD automatically disappears after about 30 seconds. To close the OSD, press the ⊜ button again.

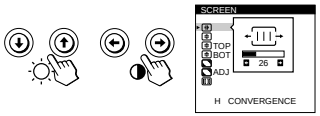
To reset, press the ⇢ (reset) button while the OSD is on. The selected item is reset to the factory settings.

Using the SCREEN On-screen Display

You can adjust convergence settings to eliminate red or blue shadows that may appear around objects on the screen. Adjust the CANCEL MOIRE function to eliminate wavy or elliptical patterns that may appear on the screen.
Adjust the LANDING function to correct color imbalances at the four corners of the screen due to influence from the earth's magnetism.
Once CANCEL MOIRE is adjusted, it will be stored in memory for the current input signal. All other adjustments will be stored in memory for all input signals received.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " SCREEN," and press the ⊜ button again.
The SCREEN OSD appears.



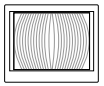
3 Press the ☼↓/↑ buttons to select the item you want to adjust.

Select	To
H CONVERGENCE	adjust the horizontal convergence
V CONVERGENCE	adjust the vertical convergence
TOP V CONVER TOP	adjust the screen's upper vertical convergence
BOT V CONVER BOTTOM	adjust the screen's lower vertical convergence

Select	To
LANDING	select one of the four corners that needs color correction due to influence from the earth's magnetism
ADJ LANDING ADJUST	correct the color at one of the four corners of the screen
CANCEL MOIRE *	turn the moire cancellation function "ON" or "OFF." CANCEL MOIRE must be "ON" for " ADJ (MOIRE ADJUST)" to appear on the screen.
ADJ MOIRE ADJUST	adjust the degree of moire cancellation

* Moire is a type of natural interference which produces soft or wavy lines on your screen. It may appear due to interference between the regulated pattern of the picture from the input signal and the phosphor pitch pattern of the CRT.

Example of moire:



4 Press the ◑←/→ buttons to adjust the settings.

For	Press
H CONVERGENCE	→ . . . to shift red shadows to the right and blue shadows to the left ← . . . to shift red shadows to the left and blue shadows to the right
V CONVERGENCE	→ . . . to shift red shadows up and blue shadows down ← . . . to shift red shadows down and blue shadows up
TOP V CONVER TOP	→ . . . to shift red shadows up and blue shadows down ← . . . to shift red shadows down and blue shadows up
BOT V CONVER BOTTOM	→ . . . to shift red shadows up and blue shadows down ← . . . to shift red shadows down and blue shadows up
LANDING	→ or ← . . . to select the corner of the screen you want to adjust : top left, : top right, : bottom left, : bottom right
ADJ LANDING ADJUST	→ or ← . . . to reduce any irregularities in the color to a minimum
CANCEL MOIRE	→ . . . to turn CANCEL MOIRE "ON" ← . . . to turn CANCEL MOIRE "OFF"
ADJ MOIRE ADJUST	→ or ← . . . to adjust the screen until the moire is at a minimum

Note
The picture may become fuzzy when CANCEL MOIRE is set to "ON."

The OSD automatically disappears after about 30 seconds. To close the OSD, press the ⊜ button again.

To reset, press the ⇢ (reset) button while the OSD is on. The selected item is reset to the factory setting.

EN

Using the OPTION On-screen Display

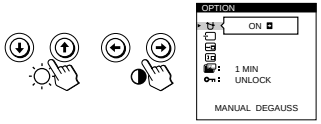
The OPTION OSD allows you to manually degauss the screen and adjust settings such as the OSD position and power saving delay time. It also allows you to lock the controls.

Degaussing the screen

The monitor screen is automatically degaussed (demagnetized) when the power is turned on.
You can also manually degauss the monitor.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the ⊜ button again.
The OPTION OSD appears.



3 Press the ☼↓/↑ buttons to select " (MANUAL DEGAUSS)."

4 Press the ◑→ button.
The screen is degaussed for about 3 seconds.

If you need to degauss the screen a second time, wait for at least 20 minutes before repeating the steps above.

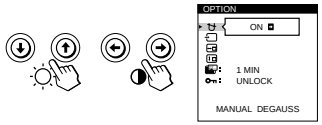
The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

Changing the on-screen display position

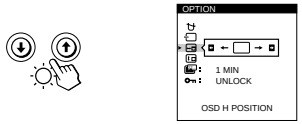
You can change the OSD position (for example, when you want to adjust the picture behind the OSD).

1 Press the ⊜ button.
The MENU OSD appears.

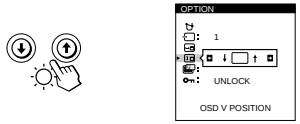
2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the ⊜ button again.
The OPTION OSD appears.



3 Press the ☼↓/↑ buttons to select " (OSD H POSITION)" or " (OSD V POSITION)."
Select " (OSD H POSITION)" to adjust the horizontal position.



Select " (OSD V POSITION)" to adjust the vertical position.



4 Press the ◑←/→ buttons to move the OSD to the desired position.

The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

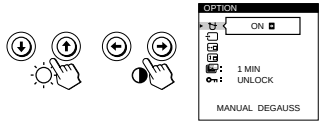
To reset, press the ⇢ (reset) button while the OSD is on.

Setting the power saving delay time

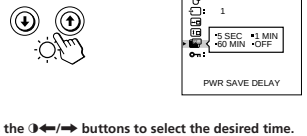
You can set the delay time before the monitor enters the power saving mode. See page 15 for more information on this monitor's power saving capabilities.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the ⊜ button again.
The OPTION OSD appears.



3 Press the ☼↓/↑ buttons to select " (PWR SAVE DELAY)."



4 Press the ◑←/→ buttons to select the desired time.

When PWR SAVE DELAY is set to "OFF," the monitor does not go into power saving mode.

The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

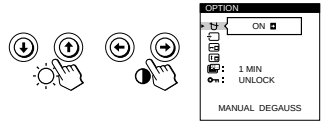
To reset, press the ⇢ (reset) button while the OSD is on.

Locking the controls

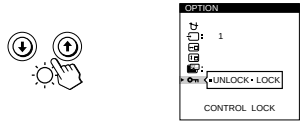
The control lock function disables all of the buttons on the front panel except the ⏻ (power) switch and ⊜ button.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the ⊜ button again.
The OPTION OSD appears.



3 Press the ☼↓/↑ buttons to select " (CONTROL LOCK)."



4 Press the ◑←/→ buttons to select "LOCK."

The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

Once you select "LOCK," you cannot select any items except "EXIT" and " OPTION" in the MENU OSD.
If you press any button other than the ⏻ (power) switch and ⊜ button, the 🔑 mark appears on the screen.

To cancel the control lock

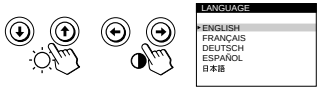
Repeat steps 1 through 3 above and press the ◑←/→ buttons to select "UNLOCK."

Using the LANG (Language) On-screen Display

English, French, German, Spanish and Japanese versions of the OSDs are available.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼/↓/↑ and ◑/←/→ buttons to select "🅰 LANG," and press the ⊜ button again.
The LANGUAGE OSD appears.



3 Press the ☼/↓/↑ buttons to select the desired language.

ENGLISH: English, FRANÇAIS: French,
DEUTSCH: German, ESPAÑOL: Spanish,
or 日本語: Japanese.

The OSD automatically disappears after about 30 seconds. To close the OSD, press the ⊜ button again.

To reset to English, press the ⇢ (reset) button while the OSD is on.

Resetting the Adjustments

Resetting an adjustment item

1 Press the ⊜, ☼/↓/↑ and ◑/←/→ buttons to select the OSD containing the item you want to reset.

2 Press the ☼/↓/↑ buttons to select the item you want to reset.

3 Press the ⇢ (reset) button.

Resetting all of the adjustment data for the current input signal

When there is no OSD displayed, press the ⇢ (reset) button.
All of the adjustments data for the current input signal is reset to the factory settings.
Note that adjustment data not affected by changes in input signal (OSD language, OSD position, input signal selection, power saving delay time and the control lock function) is not reset to the factory settings.

Resetting all of the adjustment data for all input signals

Press and hold the ⇢ (reset) button for more than two seconds.
All of the adjustment data, including the brightness and contrast, is reset to the factory settings.

Power Saving Function

This monitor meets the power-saving guidelines set by VESA and Energy Star, as well as the more stringent NUTEK .
If the monitor is connected to a computer or video graphics board that is VESA DPMS (Display Power Management Signaling) compliant, the monitor will automatically reduce power consumption in three stages as shown below.

You can set the delay time before the monitor enters the power saving mode using the OSD. Set the time according to "Setting the power saving delay time" on page 13.

Note
If no video signal is input to the monitor, the "NO INPUT SIGNAL" message (page 16) appears. After the delay time has passed, the power saving function automatically puts the monitor into the active-off mode and the ⏻ indicator lights up orange. Once the horizontal and vertical sync signals are detected, the monitor automatically resumes its normal operation mode.

	Power consumption mode	Screen	Horizontal sync signal	Vertical sync signal	Power consumption	Recovery time	⏻ indicator
1	Normal operation	active	present	present	≤ 160 W	—	Green
2	Standby (1st mode)	blank	absent	present	≤ 100 W	Approx. 3 sec.	Green and orange alternate
3	Suspend (2nd mode)	blank	present	absent	≤ 15 W	Approx. 3 sec.	Green and orange alternate
4	Active-off (3rd mode)	blank	absent	absent	< 5 W	Approx. 10 sec.	Orange
5	Power-off	—	—	—	0 W	—	Off

Preset Modes

No.	Resolution (dots × lines)	Horizontal Frequency	Vertical Frequency	Graphics Mode
1	640 × 480	31.5 kHz	60 Hz	VGA
2	640 × 480	43.3 kHz	85 Hz	VESA
3	800 × 600	53.7 kHz	85 Hz	VESA
4	1024 × 768	68.7 kHz	85 Hz	VESA
5	1280 × 1024	80.0 kHz	75 Hz	VESA
6	1280 × 1024	91.1 kHz	85 Hz	VESA
7	1600 × 1200	93.8 kHz	75 Hz	VESA
8	1600 × 1200	106.3 kHz	85 Hz	VESA

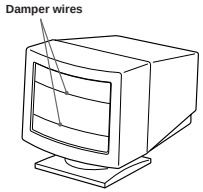
Plug & Play

This monitor complies with the DDC™1, DDC2B, DDC2AB and DDC2B+ Display Data Channel (DDC) standards of VESA.
When a DDC1 host system is connected, the monitor synchronizes with the V. CLK in accordance with the VESA standards and outputs the EDID (Extended Display Identification Data) to the data line.
When a DDC2B, DDC2AB or DDC2B+ host system is connected, the monitor automatically switches to the appropriate standard.

DDC™ is a trademark of the Video Electronics Standard Association.

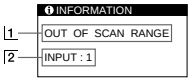
Damper Wires

When viewing a white background, very thin horizontal lines may be visible on the screen as shown below. These lines are the shadows of the damper wires and are characteristic of CRTs that use aperture grilles. The wires are attached to the aperture grille on the inside of the Trinitron tube and prevent the vibration of the aperture grille.



Warning Messages

If there is something wrong with the input signal, one of the following messages appears.



1 The input signal condition

"OUT OF SCAN RANGE" indicates that the input signal is not supported by the monitor's specifications.

"NO INPUT SIGNAL" indicates that no signal is input, or the input signal from the selected input connector is not received.

2 The selected input connector

Indicates which input connector is receiving the wrong signal. If there is something wrong with the signal from both input connectors, "1" (HD15) and "2" (13W3) are displayed alternately.

To solve these problems, see "Troubleshooting" below.

Troubleshooting

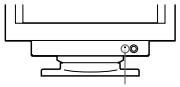
This section may help you isolate the cause of a problem and as a result, eliminate the need to contact technical support.

Symptom	Check these items
No picture	
If the ⏻ indicator is not lit	• Check that the power cord is properly connected. • Check that the ⏻ (power) switch is in the "on" position.
If the "NO INPUT SIGNAL" message appears on the screen, or if the ⏻ indicator is either orange or alternating between green and orange	• The screen is blank when the monitor is in power saving mode. Try pressing any key on the computer keyboard. • Check that your computer power switch is in the "on" position. • Check that the input select setting is correct. • Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets. • Ensure that no pins are bent or pushed in the HD15 or 13W3 video input connector. • Check that the video board is completely seated in the proper bus slot.
If the "OUT OF SCAN RANGE" message appears on the screen	• Check that the video frequency range is within that specified for the monitor. (Horizontal: 30 – 107 kHz, Vertical: 50 – 160 Hz) Refer to your computer's instruction manual to adjust the video frequency range. • If you are using a video signal cable adapter, check that it is correct.
If no message is displayed and the ⏻ indicator is green or flashing orange	• See "Self-diagnosis Function" (page 18).
Picture is scrambled	• Check your graphics board manual for the proper monitor setting. • Check this manual and confirm that the graphics mode and the frequency you are trying to operate at is supported. Even if the frequency is within the proper range, some video boards may have a sync pulse that is too narrow for the monitor to sync correctly.
Color is not uniform	• Degauss the monitor (page 12). If you place equipment which generates a magnetic field, such as a loudspeaker, near the monitor, or you change the direction of the monitor, color may lose uniformity. The degauss function demagnetizes the metal frame of the CRT to obtain a neutral field for uniform color reproduction. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result. • Adjust the landing (pages 10 – 11).

Symptom	Check these items
You cannot adjust the monitor with the buttons on the front panel	• If the control lock function is set to on, set it to off using the OPTION OSD (page 13).
White does not look white	• Adjust the color temperature (page 10).
Screen image is not centered or sized properly	• Press the ⊡ button (page 5). • Adjust the size or centering (pages 7 – 8). • Some video modes do not fill the screen to the edges. This problem tends to occur with certain video boards.
Edges of the image are curved	• Adjust the geometry (pages 8 – 9).
White lines show red or blue shadows at edges	• Adjust the convergence (pages 10 – 11).
Picture is fuzzy	• Adjust the contrast and brightness (page 6). • Degauss the monitor (page 12). If you place equipment which generates a magnetic field, such as a loudspeaker, near the monitor, or you change the direction of the monitor, color may lose uniformity. The degauss function demagnetizes the metal frame of the CRT to obtain a neutral field for uniform color reproduction. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result. • If red or blue shadows appear along the edges of images, adjust the convergence (pages 10 – 11). • If the moire is cancelled, the picture may become fuzzy. Decrease the moire cancellation effect (pages 10 – 11).
Picture bounces or has wavy oscillations	• Isolate and eliminate any potential sources of electric or magnetic fields. Common causes for this symptom are electric fans, fluorescent lighting or laser printers. • If you have another monitor close to this monitor, increase the distance between them to reduce the interference. • Try plugging the monitor into a different AC outlet, preferably on a different circuit. • Try the monitor on a different computer in a different room.
Picture is flickering	• Set the refresh rate on the computer to obtain the best possible picture by referring to the computer's manual.
Picture appears to be ghosting	• Eliminate the use of video cable extensions and/or video switch boxes if this symptom occurs. Excessive cable length or a weak connection can produce this symptom.
Wavy or elliptical (moire) pattern is visible	• Cancel the moire (pages 10 – 11). The moire may be modified depending on the connected computer. • Due to the relationship between resolution, monitor dot pitch and the pitch of some image patterns, certain screen backgrounds sometimes show moire. Change your desktop pattern.
Two fine horizontal lines (wires) are visible	• These wires stabilize the vertically striped aperture grille (page 15). This aperture grille allows more light to pass through to the screen giving the Trinitron CRT more color and brightness.
Hum is heard right after the power is turned on	• When the power is turned on, the auto-degauss cycle is activated. While the auto-degauss cycle is activated (3 seconds), a hum may be heard. The same hum is heard when the monitor is manually degaussed. This is not a malfunction.

Self-diagnosis Function

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer(s), the screen will go blank and the ⏻ indicator will either light up green or flash orange.



⏻ indicator

If the ⏻ indicator is green

1 Remove any plugs from the video input 1 and 2 connectors, or turn off the connected computer(s).

2 Press and hold the ◑→ button for 2 seconds.

If all four color bars appear (white, red, green, blue), the monitor is working properly. Reconnect the video input cables and check the condition of your computer(s).

If the color bars do not appear, there is a potential monitor failure. Inform your service representative of the monitor's condition.

If the ⏻ indicator is flashing orange

Press the ⏻ button to turn the monitor off and on.

If the ⏻ indicator lights up green, the monitor is working properly.

If the ⏻ indicator is still flashing, there is a potential monitor failure. Count the number of seconds between orange flashes of the ⏻ indicator and inform your service representative of the monitor's condition. Be sure to note the model name and serial number of your monitor. Also note the make and model of your computer and video board.

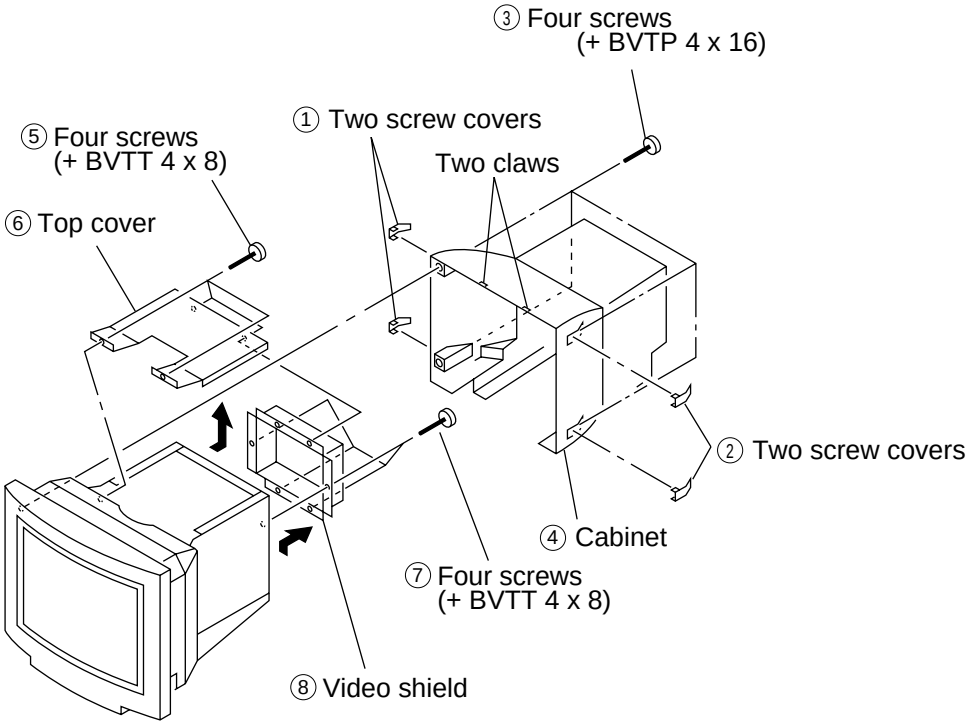
Specifications

Picture tube	0.25 – 0.27 mm aperture grille pitch 21 inches measured diagonally 90-degree deflection
Viewable image size	Approx. 403.8 × 302.2 mm (w/h) (16 × 12 inches) 19.8" viewing image
Resolution	Horizontal: Max. 1600 dots Vertical: Max. 1200 lines
Standard image area	Approx. 388 × 291 mm (w/h) ($15\ ^{3}/_{8} \times 11\ ^{1}/_{2}$ inches) or Approx. 364 × 291 mm (w/h) ($14\ ^{3}/_{8} \times 11\ ^{1}/_{2}$ inches)
Deflection frequency	Horizontal: 30 to 107 kHz Vertical: 50 to 160 Hz 256 < Total Line < 2048
AC input voltage/current	100 to 240 V, 50 – 60 Hz, 2.0 – 1.0 A
Power consumption	Max. 160 W
Dimensions	498 × 513 × 500 mm (w/h/d) ($19\ ^{5}/_{8} \times 20\ ^{1}/_{4} \times 19\ ^{3}/_{4}$ inches)
Mass	Approx. 31 kg (68 lb 5 oz)

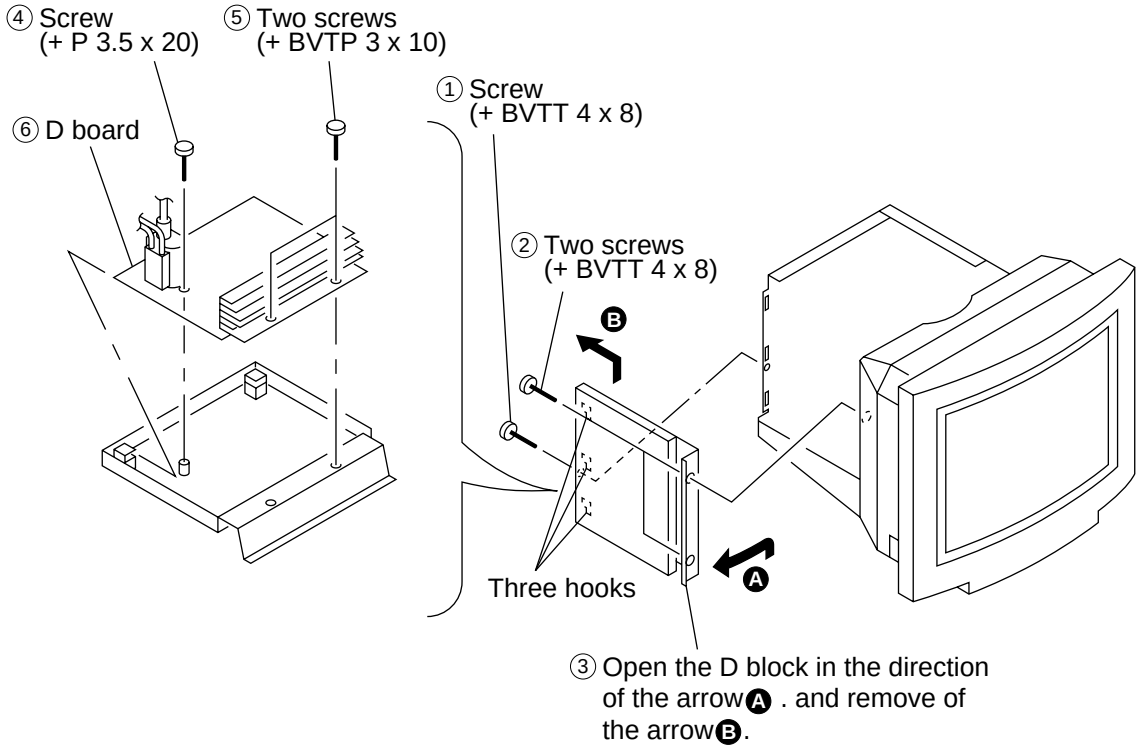
Design and specifications are subject to change without notice.

SECTION 2
DISASSEMBLY

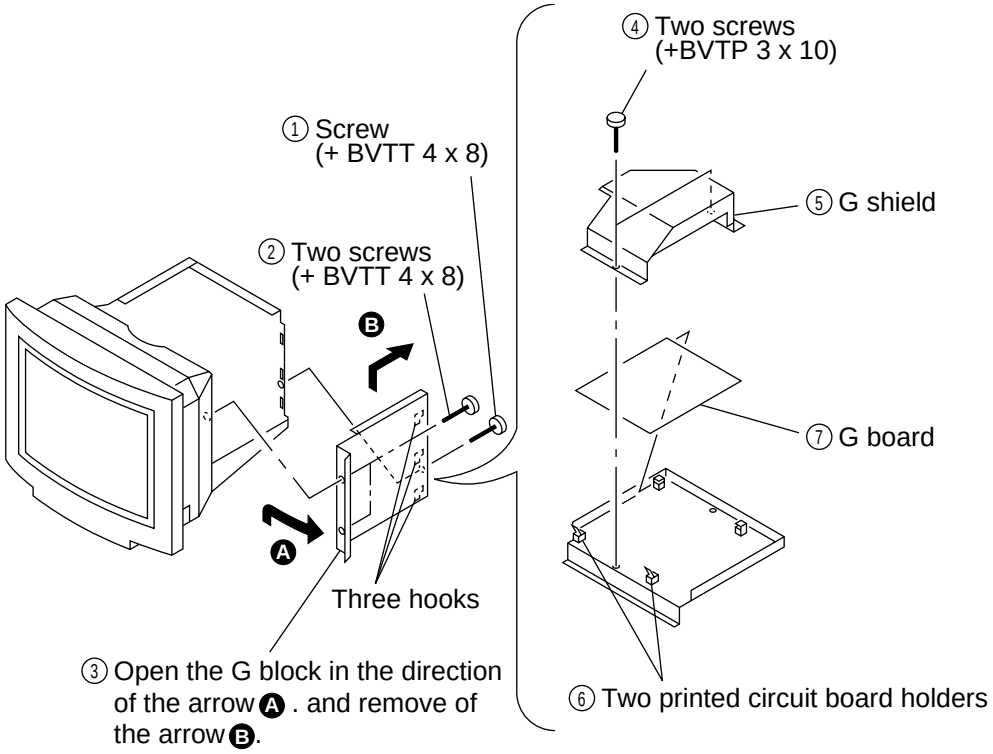
2-1. CABINET REMOVAL



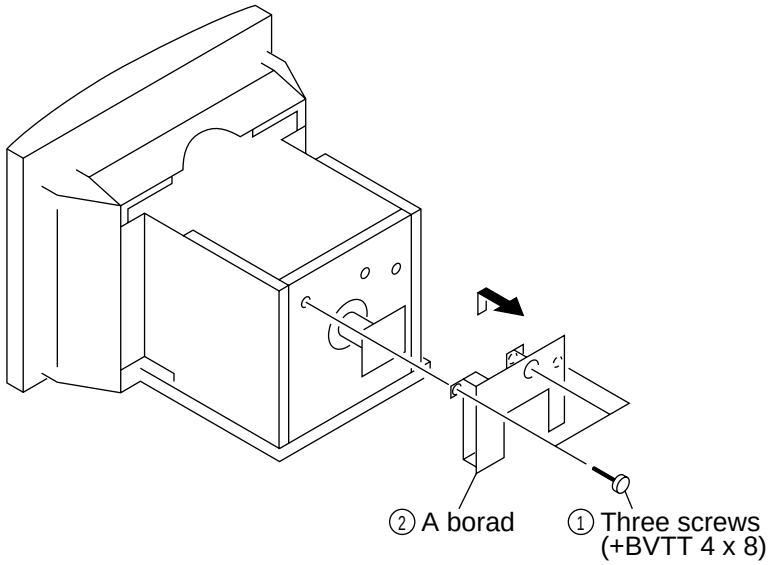
2-2. D BOARD REMOVAL



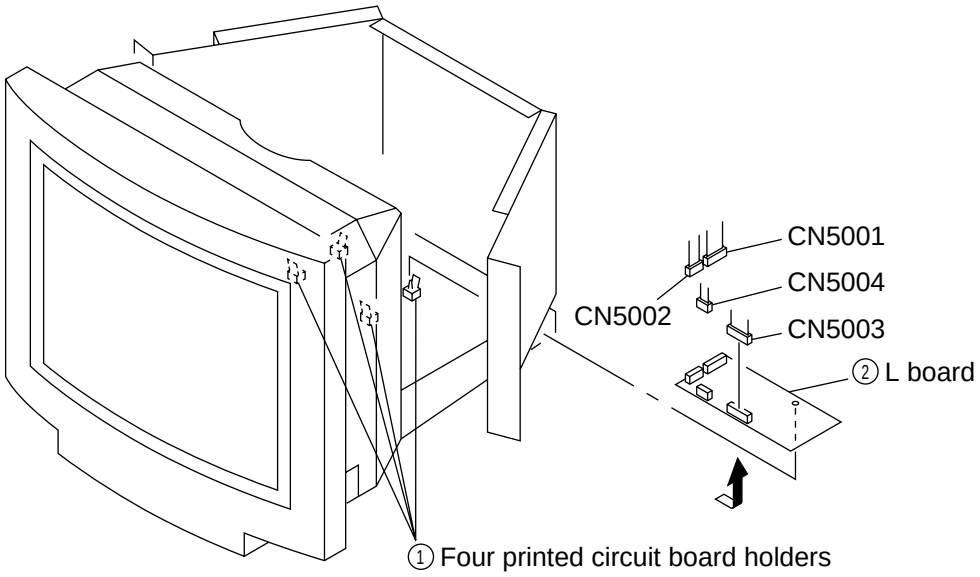
2-3. G BOARD REMOVAL


④ Two screws
(+BVTP 3 x 10)
① Screw
(+ BVTT 4 x 8)
⑤ G shield
② Two screws
(+ BVTT 4 x 8)
B
⑦ G board
A
Three hooks
③ Open the G block in the direction of the arrow A . and remove of the arrow B.
⑥ Two printed circuit board holders

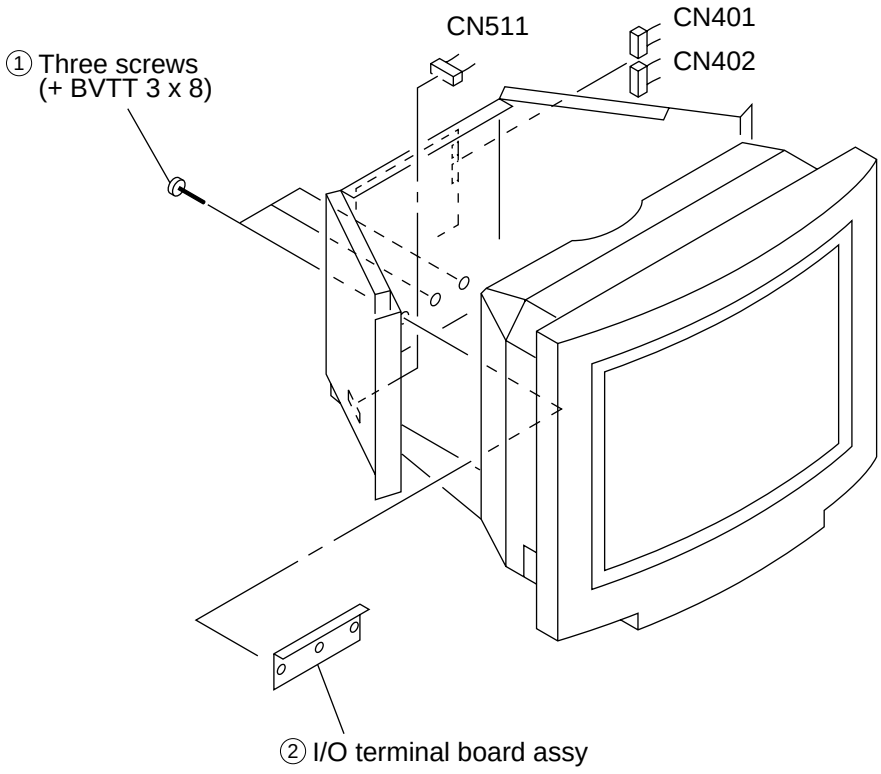
2-4. A BOARD REMOVAL



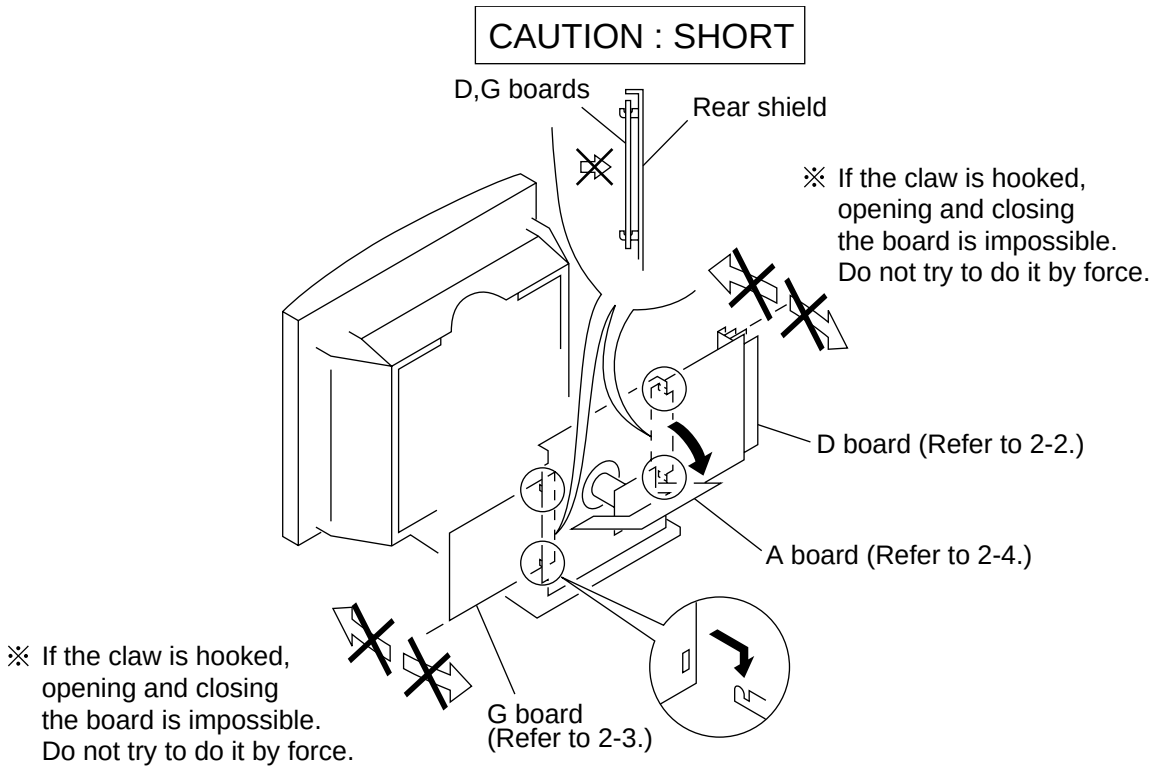
2-5. L BOARD REMOVAL



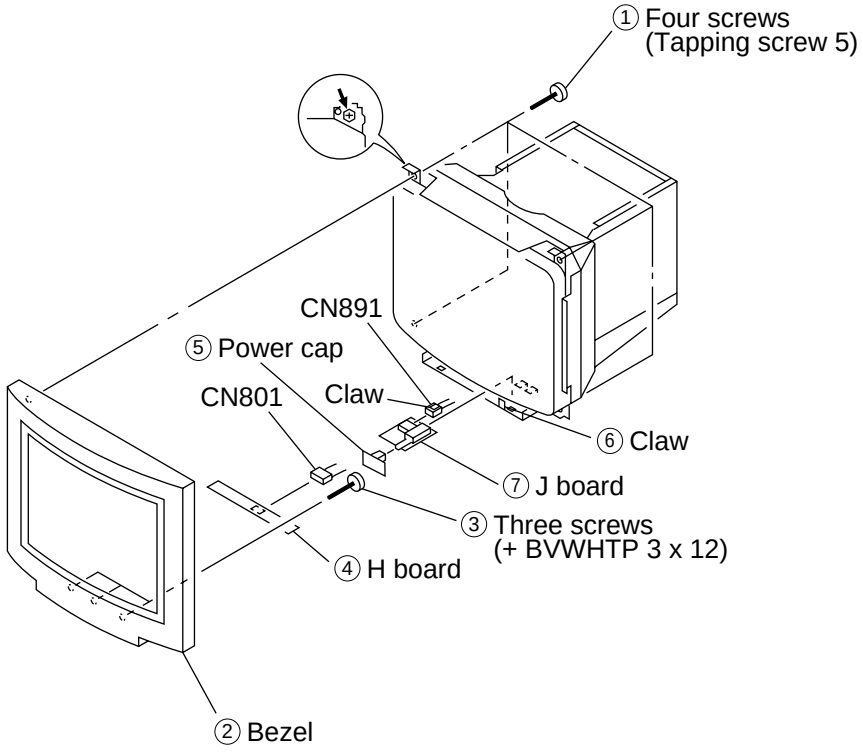
2-6. I/O TERMINAL BOARD ASSY REMOVAL



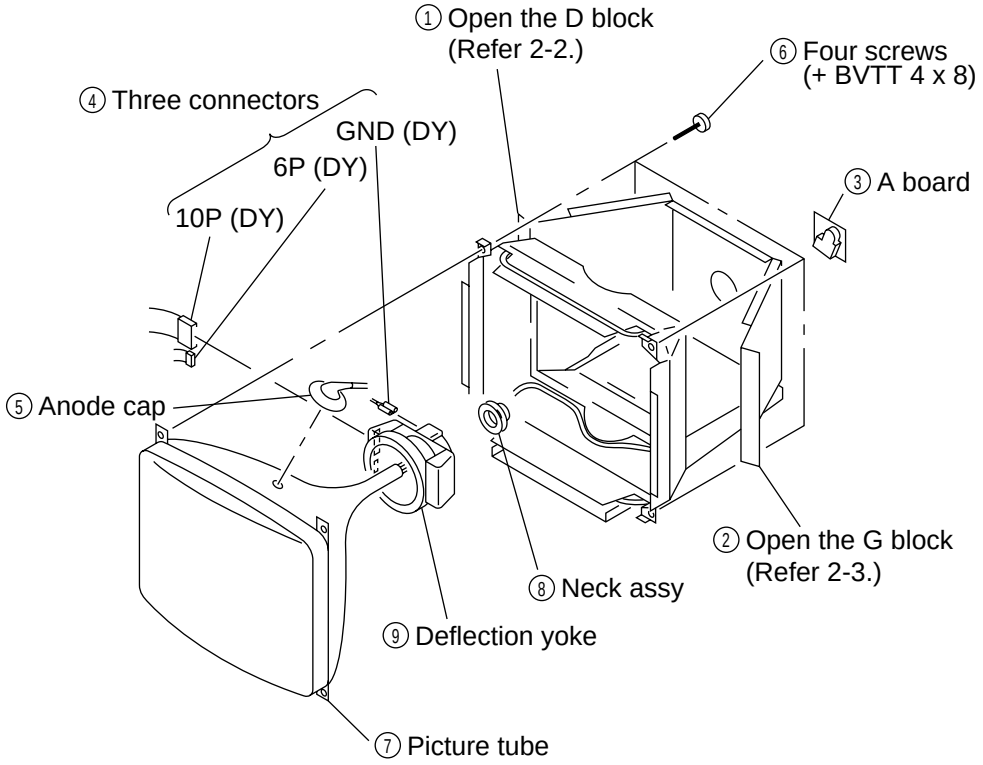
2-7. SERVICE POSITION


CAUTION : SHORT
D,G boards
Rear shield
※ If the claw is hooked, opening and closing the board is impossible. Do not try to do it by force.
D board (Refer to 2-2.)
A board (Refer to 2-4.)
※ If the claw is hooked, opening and closing the board is impossible. Do not try to do it by force.
G board (Refer to 2-3.)

2-8. H AND J BOARDS REMOVAL



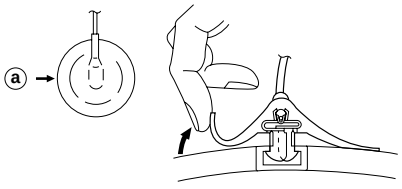
2-9. PICTURE TUBE REMOVAL



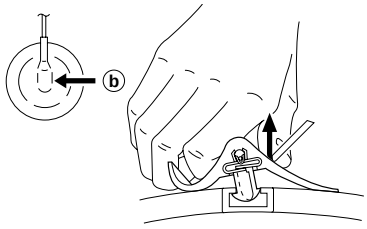
• REMOVAL OF ANODE-CAP

NOTE: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

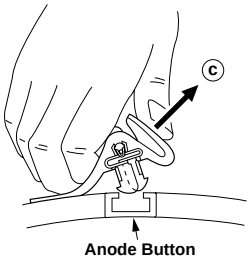
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



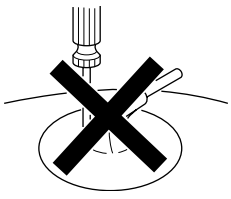
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.

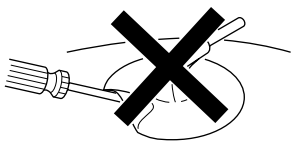


③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with shartp shaped material!
② Don't press the rubber hardly not to hurt inside of anode-caps! A material fitting called as shatter-hook terminal is built in the rubber.
③ Don't turn the foot of rubber over hardly! The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SAFETY RELATED ADJUSTMENT

When replacing or repairing the shown below table, the following operational checks must be performed as a safety precaution against X-rays emissions from the unit.

	Part Replaced (◪)
HV Regulator Circuit Check	D Board IC901, T902 • Mounted D board
HV Protector Circuit Check	D Board Q660, Q661, D916, D935, C924, R665, R667, R940, R980, T902 • Mounted D board G Board PH680, Q680, Q683, D680, R680, R685, R686, R687, R688, R689 • Mounted G board
Beam Current Protector Circuit Check	D Board IC901, D904, D907, D908, R011, R908, R909, R921, R925, R926, R929, R930, T902 • Mounted D board

Check Condition

Input voltage : 100 ~ 240 VAC
Input signal : White Cross Hatch at 107 kHz
Beam control : BRT and CONT → Minimum
B+ voltage : 195 ~ 205 VDC

a) HV Regulator Circuit Check

1) Confirm that the voltage of the pin ② of CN901 on D board is within the voltage range shown below.
Standard: 9.00 ± 0.065 VDC

b) HV Protector Circuit Check

1) Confirm that the HV protector circuit works and TV Raster disappears when apply the voltage as shown below between pin ③ of CN901 on D board and GND using an external DC power supply.
Check Condition: Less than 34.10 VDC

c) Beam Current Protector Circuit Check-1

1) Measure HV voltage and record that value.
2) Shorted between pin ① and pin ④ of CN901 on D board.
3) Connect to the Constant Current Jig (A) between pin ① of CN901 on D board and GND, confirm that the Beam Current Protector Circuit works and HV go down more than 1.25 kV from the value of (1).
Check Condition: 1.50 mA

d) Beam Current Protector Circuit Check-2

1) Connect to the Constant Current Jig (B) between pin ① of CN901 on D board and GND, confirm that the Beam Current Protector Circuit works and TV Raster disappears.
Check Condition: 1.59 mA

e) Voltage of 3rd winding of FBT

1) Confirm that the voltage of pin ③ of CN901 on D board is within the voltage range shown below.
Standard: more than 28.0 VDC

SECTION 4
ADJUSTMENTS

Note: Hand degauss must be used on stand-by or power-off condition.
This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.

• Landing Rough Adjustment

1. Enter the full white signal. (or the full black dots signal).
2. Adjust the contrast to the maximum.
3. Make the screen monogreen.

Note: Off the outputs from R ch and B ch of SG.

4. Reverse the DY, and adjust coarsely the purity magnet so that a green raster positions in the center of screen.
5. Adjust the tilt of DY, and fix lightly with a clamp.

Note: "TILT" shall be set at 0.

• Landing Fine Adjustment

1. Put the set inside the Helmholtz coil. ("LCC SW" = "12")
2. Input the single green signal and set the CONT control to MAX.

Note: After the W/B adjustment with 9300K, measure an average of ΣIk when a full white signal is entered in the CONT MAX/BRT CENT status. Then make adjustment so that the specified screen can be attained after aging for 2 hours with Ik equivalent to 30% of the average value.

3. Demagnetize the metal part of the chassis with the hand degausser and coil degausser, and the CRT surface with the hand degausser.
   Input AC 230V to AC IN, turn on and off the power to perform auto degaussing. (Perform auto degaussing by setting "MON CON REG2"=152. Return to the original value after use.)
   Demagnetize the CRT surface with the hand degausser again.

Note:

(1) Hand degauss must be used on stand-by or power-off condition.
   This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.
(2) Adjust in a non-magnetic field. BV=45uT.
(3) If adjusting in a magnetic fields, add the shift from the non-magnetic field in your estimation.

4. Attach the wobbling coil to the designated part of the CRT neck.
5. Attach the sensor of the landing adjustment unit on the CRT surface.
6. Adjust the DY position and purity, and the DY tilt, and landing of the center and 4 corners with the landing checker.
   After adjustment, set "LCC SW" to "13".
   • Write terrestrial magnetism sensor reading VX and VY to "LCC VX" and LCC VY" respectively. Adjust the landing by moving "LCC NS", "LCC LT", "LCC LB", "LCC RT" and "LCC RB". However, the register adjustment must be limited within the following range.
   "LCC NS" 128 ± 15
   "LCC LT", "LCC LB", "LCC RT", "LCC RB" 128 ± 40
   Save the service data.

<Specifications>
Adjust so that the green is within the specification given right.
4 corner adjust target : within ± 1

(μm)

0 ± 3	0 ± 7.5	0 ± 3
0 ± 5	0 ± 5	0 ± 5
0 ± 3	0 ± 7.5	0 ± 3

The red and blue must be within the specification given right with respect to the green.

(μm)

± 6	± 6	± 6
± 6	± 4	± 6
± 6	± 6	± 6

A difference between red and blue must be within the specification given right.

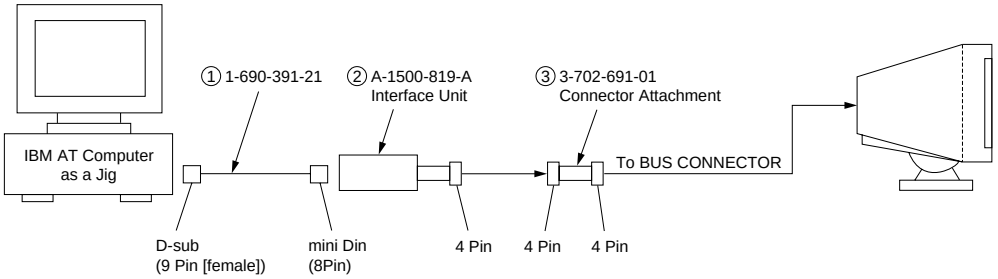
(μm)

10	10	10
10	7	10
10	10	10

* Adjustment and measurement should be made at the points one inch inside the fluorescent screen.

7. For the up/down swing, swing the DY and insert a wedge so that the up and down pins are equal at the top and bottom. Adjust the DY TLV VR so that the horizontal trapezoid is equal at the left and right. Insert the wedge firmly so that the DY does not shake.
8. Check the landing of each corner, and if it does not satisfy the specification, adjust the landing of four corners using "LCC LT", "LCC LB", "LCC RT" and "LCC RB".
   However, the register adjustment must be limited within the following range.
   "LCC NS" 128 ± 15
   "LCC LT", "LCC LB", "LCC RT", "LCC RB" 128 ± 40
   After adjustment, save the service data.
9. Remove the sensor and wobbling coil.
10. Switch the signal to R.G.B., and check that each color is pure.
11. Check that the DY is not tilting.

Connect the communication cable of the computer to the connector located on the D board on the monitor. Run the service software and then follow the instruction.



*The parts above (① ~ ③) are necessary for DAS adjustment.

- **Convergence Rough Adjustment**

(1) Receive an image of the white crosshatch signals (white lines on black).
(2) Place the protrusions of the 6-fold poles magnet attached to the CRT neck upon each other. (Fig. 1)
(3) Make rough adjustment of the H and V direction convergence by using 4-fold poles magnet.
(4) Make a rough adjustment of the V direction convergence by using "V. STAT".

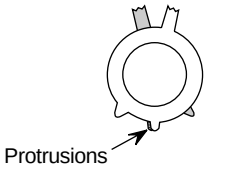


Fig. 1

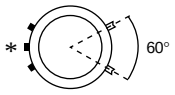


Fig. 3

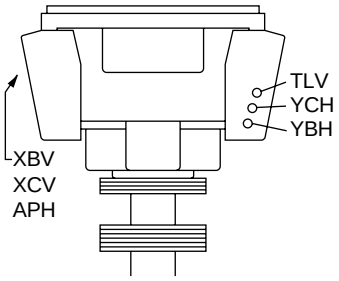
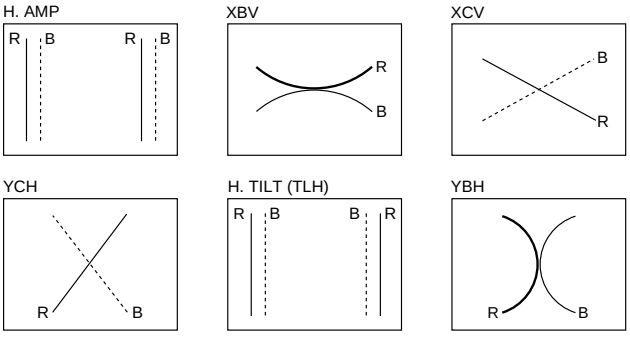
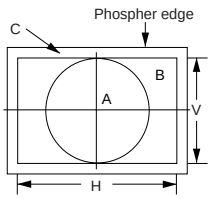


Fig. 2

* Set so that the protruding parts of the 2 magnet rings agree with each other.



- **Convergence Specification**

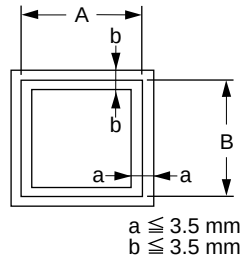


MODE	Zone	N. Hemisphere	S. Hemisphere
fH≥ 60 kHz	A Zone	0.24 mm	0.24 mm
	B Zone	0.24 mm	0.28 mm
	C Zone	0.32 mm	0.32 mm
fH≤ 60 kHz	A Zone	0.24 mm	0.28 mm
	B Zone	0.32 mm	0.36 mm
	C Zone	0.36 mm	0.40 mm

- **White Balance Adjustment Specification**

(1) 9300K
x = 0.281 ± 0.005
y = 0.311 ± 0.005
(All White)
(2) 6500K
x = 0.313 ± 0.005
y = 0.329 ± 0.005
(All White)

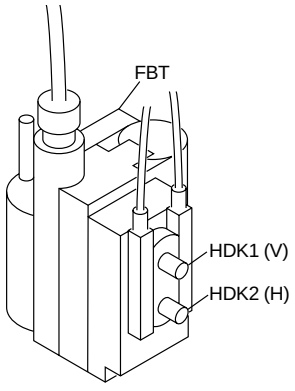
- **Vertical and Horizontal Position and Size Specification**



MODE	1-4, 7, 8	5, 6
A	388 mm	364 mm
B	291 mm	291 mm

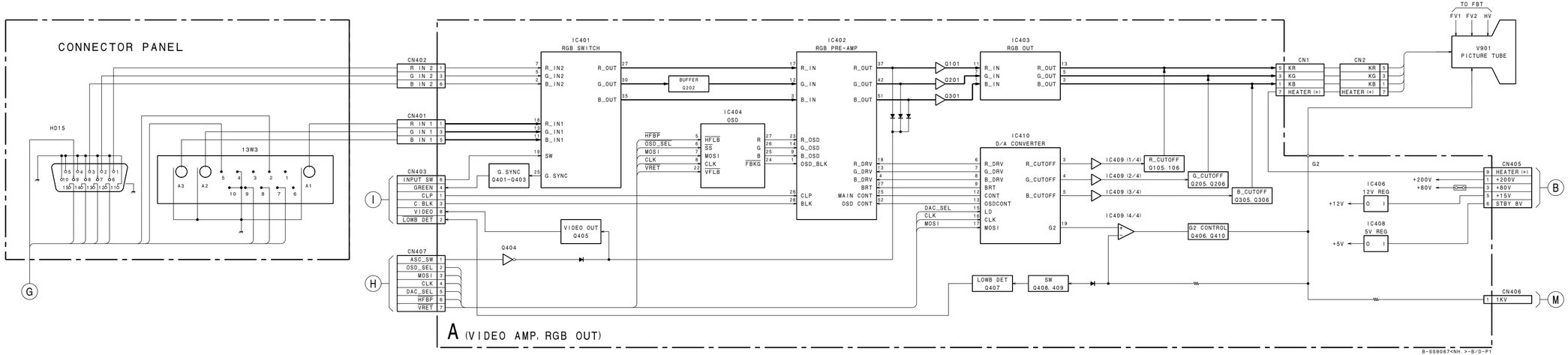
- **Focus adjustment**

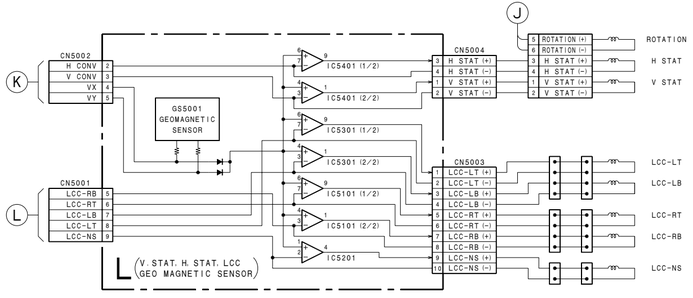
Adjust the focus volume 1 and 2 (HDK 1 and 2) for the optimum focus.

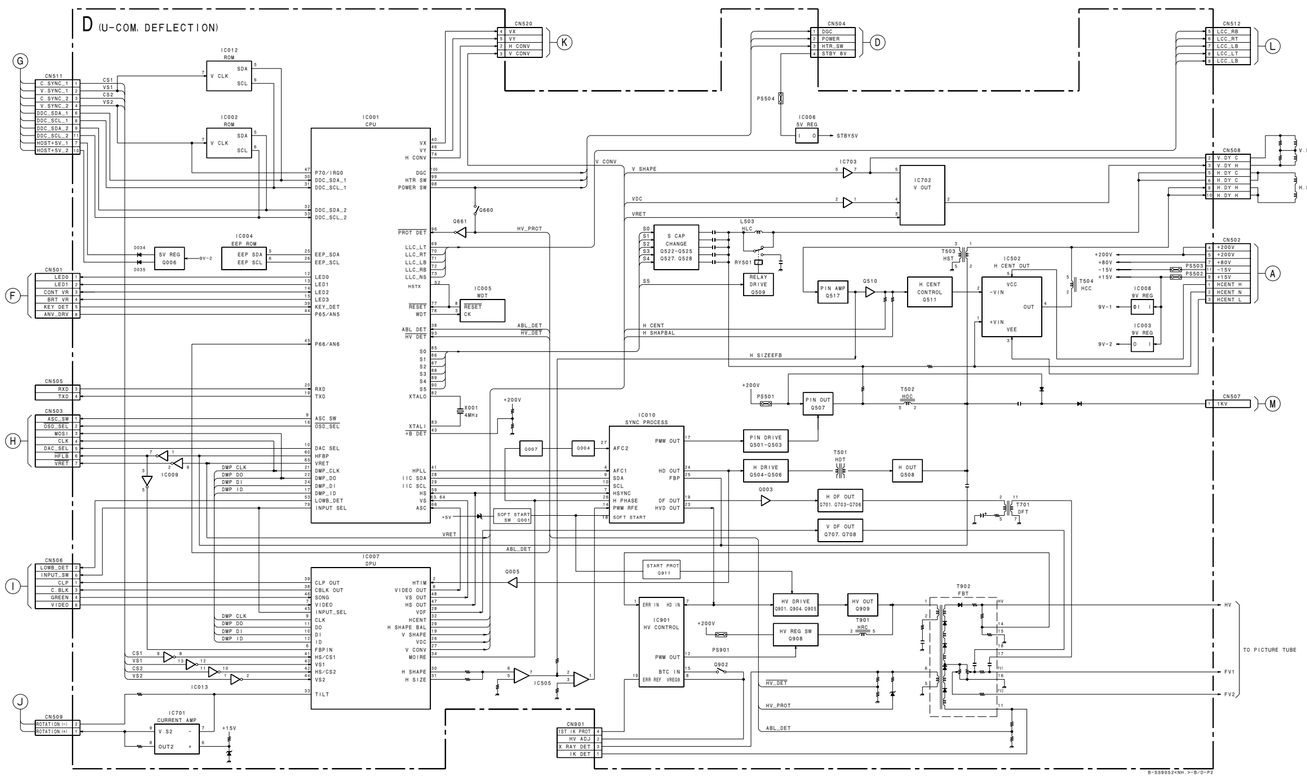


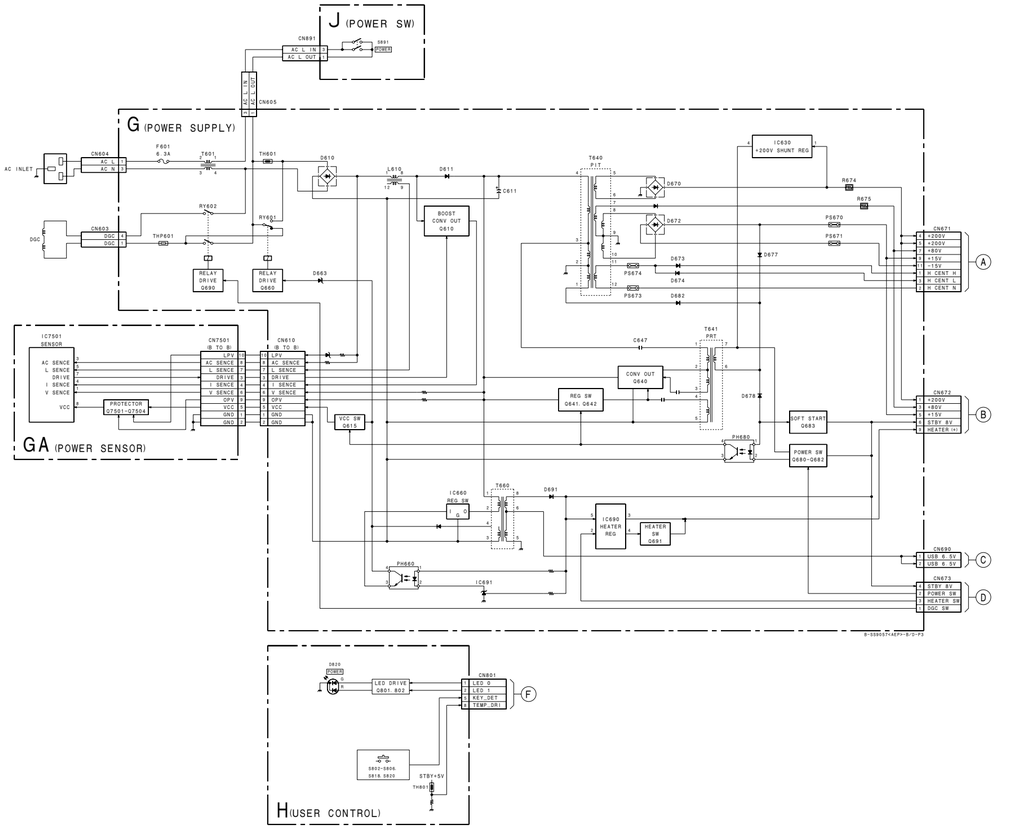
SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAMS

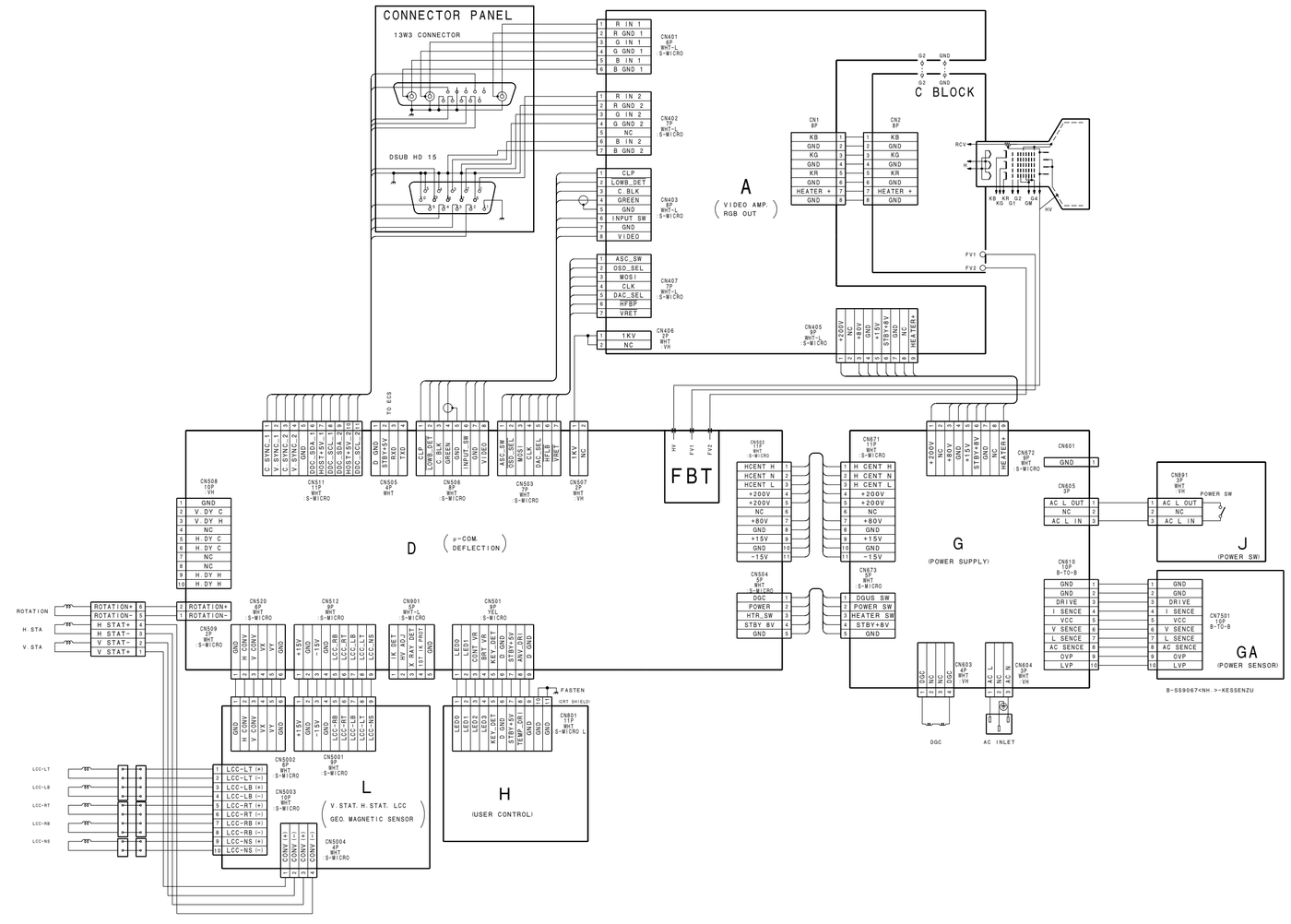




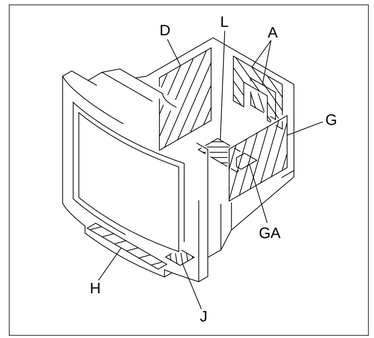

D (U-COM, DEFLECTION)
IC001 CPU
IC002 ROM
IC004 EEP ROM
IC005 MDT
IC007 DPU
IC009
IC010 SYNC PROCESS
IC012 ROM
IC013
IC501 CURRENT AMP
IC502 H CENT OUT
IC503 5V REG
IC504 HCC
IC506 5V REG
IC701 V OUT
IC703
IC7501 SENSOR
CN501
CN502
CN503
CN504
CN505
CN506
CN507
CN508
CN509
CN511
CN512
CN520
CN901
5V REG Q006
RELAY DRIVE Q509
S CAP CHANGE Q527-Q529 Q537-Q539
PIN AMP Q517
H CENT CONTROL Q511
PIN OUT Q507
PIN DRIVE Q501-Q503
H DRIVE Q504-Q506
H OUT Q508
H DF OUT Q701-Q703
V DF OUT Q707-Q708
START PROT Q911
HV DRIVE Q901-Q904-Q913
HV OUT Q909
HV REG SW Q908
PROTECTOR Q7501-Q7504
TO PICTURE TUBE
HV
FV1
FV2
V.DY
H.DY
STBY5V
HV_PROT
ABL_DET
H SIZE/EW
V SHAPE
H SHAPE/BAL
H CENT
V CONV
VCC
VREF
+200V
+15V
-15V
+80V
9V-1
9V-2
SOFT START SW Q001
RELAY DRIVE Q509
RELAY DRIVE Q690
RELAY DRIVE Q660
B-5599S2<NH >-B/D-P2


J (POWER SW)
G (POWER SUPPLY)
GA (POWER SENSOR)
H (USER CONTROL)
CN891
CN605
CN604
CN603
AC INLET
F601 6.3A
T601
TH601
TH901
RY602
RY601
D610
D611
J610
C611
BOOST CONV OUT Q610
T640
T641
PRT
IC630 +200V SHUNT REG
R674
R675
PS670
PS671
PS672
PS673
PS674
D670
D672
D673
D674
D677
D682
D683
CONV OUT Q640
REG SW Q641, Q642
VCC SW Q615
SOFT START Q683
POWER SW Q680-Q682
PW680
IC660 REG SW
T660
D691
IC690 HEATER REG
HEATER SW Q691
PW690
IC691
CN7501
CN7502
CN610
CN671
CN672
CN673
CN690
CN691
D920
LED DRIVE Q801 802
S802-S806, S816, S820
STBY+5V
B-5599S7<KEPY-B/D-P3

5-2. FRAME SCHEMATIC DIAGRAM



5-3. CIRCUIT BOARDS LOCATION



5-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μF unless otherwise noted. (pF: μμF) Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4 W (CHIP : 1/10 W)

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-ground.
- : earth-chassis.
- The components identified by ⋈ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
  Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments indicated. (See page 3-1)
- When replacing the part in below table, be sure to perform the related adjustment.

	Part replaced (◪)	
HV Regulator Circuit Check	D Board	IC901, T902 • Mounted D board
HV Protector Circuit Check	D Board	Q660, Q661, D916, D935, C924, R665, R667, R940, R980, T902 • Mounted D board
	G Board	PH680, Q680, Q683, D680, R680, R685, R686, R687, R688, R689 • Mounted G board
Beam Current Protector Circuit Check	D Board	IC901, D904, D907, D908, R011, R908, R909, R921, R925, R926, R929, R930, T902 • Mounted D board

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ✻ : Can not be measured.
- Circled numbers are waveform references.
- ——— : B + bus.
- ▬ ▬ ▬ : B – bus.

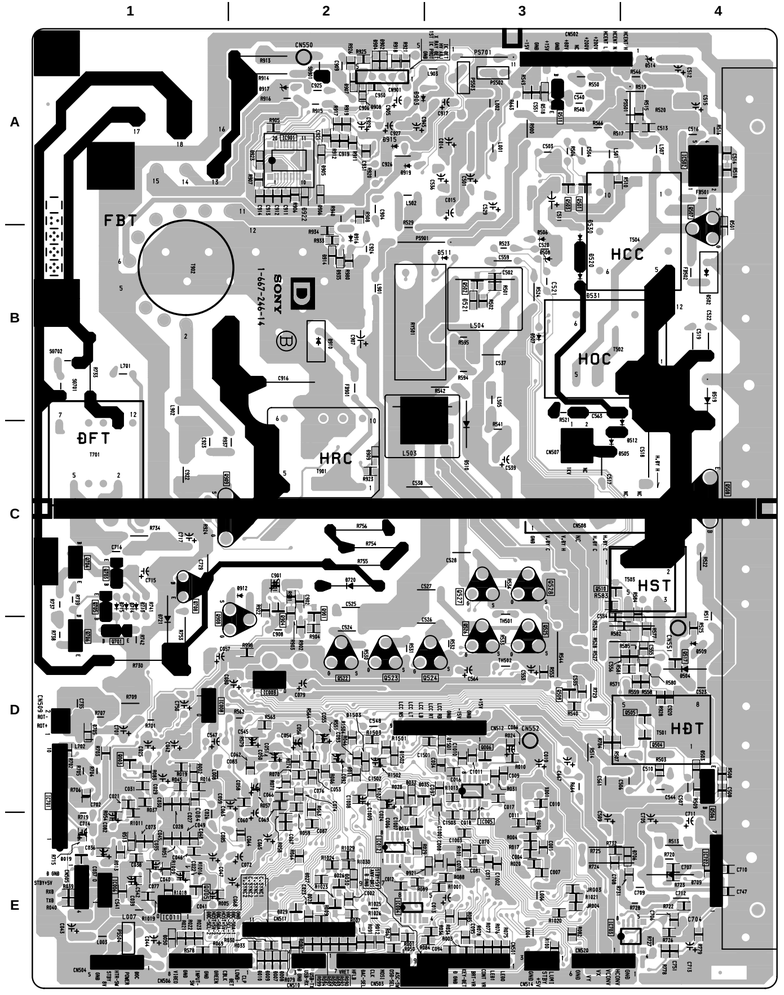
Terminal name of semiconductors in silk screen printed circuit (✻)

	Device	Printed symbol	Terminal name	Circuit
①	Transistor	T	Collector / Base / Emitter	
②	Transistor	—	Collector / Base / Emitter	
③	Diode	⊓	Cathode / Anode	
④	Diode	T	Cathode / Anode (NC)	
⑤	Diode	—	Cathode / Anode (NC)	
⑥	Diode	T	Common / Anode / Cathode	
⑦	Diode	—	Common / Anode Cathode	
⑧	Diode	T	Common / Anode / Anode	
⑨	Diode	—	Common / Anode Anode	
⑩	Diode	T	Common / Cathode / Cathode	
⑪	Diode	—	Common / Cathode Cathode	
⑫	Diode	|	Anode Cathode / Anode Anode / Cathode Anode	
⑬	Transistor (FET)	|	Drain / Source / Gate	
⑭	Transistor (FET)	⊢	Drain / Source / Gate	
⑮	Transistor (FET)	|	□ Source / □ Drain / □ Gate	
⑯	Transistor	|	□ Emitter / □ Collector / □ Base	
—	Discrete semiconductor			

(Chip semiconductors that are not actually used are included.)

Ver.1.5

— D BOARD (Conductor Side) —



D µ-COM, DEFLECTION

• D BOARD SEMICONDUCTOR LOCATION

IC

	(Conductor Side)	(Component Side)
IC001		E–2
IC002		E–3
IC003	D–2	D–3
IC004	E–2	
IC005	D–3	
IC006	E–1	E–4
IC007		D–3
IC008	D–1	D–3
IC009		D–2
IC010		E–4
IC011	E–1	E–4
IC012	E–2	
IC013		E–3
IC502	A–4	A–1
IC505		D–3
IC701	D–1	D–4
IC702	E–4	E–1
IC703	E–3	
IC901	A–2	

TRANSISTOR

	(Conductor Side)	(Component Side)	✻
Q001		D–4	②
Q003	D–1		③
Q004		D–4	②
Q005	E–1		①
Q006	D–3		①
Q007		D–4	②
Q501	A–3		①
Q502	B–3		①
Q503	A–3		①
Q504	D–4		①
Q505	D–4		①
Q506	D–4	D–1	–
Q507	A–4	A–1	–
Q508	C–4	C–1	–
Q509	D–3		①
Q510	C–3		①
Q511	A–3	A–2	–
Q512		D–2	②
Q517	D–4		①
Q522	D–2	D–3	–
Q523	D–2	D–2	–
Q524	D–3	D–2	–
Q525	D–3	D–2	–
Q526	D–3	D–2	–
Q527	C–3	C–2	–
Q528	C–3	C–2	–
Q660		D–2	②
Q661		D–2	②
Q701	D–1	D–4	–
Q703	C–1	C–4	–
Q704	C–1	C–4	–
Q705	C–1	C–4	–
Q706	D–1	D–4	–
Q707		D–3	②
Q708	C–1	C–3	–
Q901	C–2		①
Q902		A–3	②
Q904	C–2		①
Q905		C–3	②
Q908	D–2	D–3	–
Q909	C–2	C–3	–
Q911		D–3	②

DIODE

	(Conductor Side)	(Component Side)	✻
D004		E–2	⑦
D007	E–2		③
D008	E–2		③
D009	E–2		③
D010	E–2		③
D012		E–2	⑦
D013		E–2	⑦
D014		E–2	⑦
D015		E–2	⑦
D016		E–2	⑦
D019	E–1		⑥
D020		E–4	⑦
D025		D–4	③
D026	E–2		⑥
D027	E–2		⑥
D028	E–2		⑥
D029	E–2		⑥
D032	D–2		③
D033		E–2	③
D034	E–2		⑥
D035	D–3		⑥
D050	E–1		⑤
D501	B–4		③
D502	B–4	B–1	–
D503	D–4		③
D504	D–4	D–1	–
D505	C–3	C–1	–
D506	B–3	B–2	–
D507	B–3	B–2	–
D508	B–3	B–2	–
D509	D–4	D–1	–
D510	C–3	C–2	–
D511	B–3	B–2	–
D512	C–4	C–1	–
D513	E–1		③
D514	A–4	A–1	–
D516		D–2	③
D517		D–2	③
D518	A–3		③
D519	B–4	B–1	–
D521	B–3		③
D530	B–3	B–2	–
D531	B–3	B–2	–
D660		D–2	③
D701		D–4	③
D704		D–5	③
D705	D–1		③
D706	E–4		③
D709	E–4	E–1	–
D713	C–1	C–4	–
D714	C–1	C–4	–
D715	C–1	C–4	–
D718		D–4	③
D720	C–2	C–3	–
D721	D–1	D–4	–
D901		C–3	–
D902	A–2		③
D903	A–2	A–2	–
D904	A–2		③
D905	A–2		③
D906	A–2		③
D907	A–2		③
D908	A–2		③
D909	C–2		③
D910	B–2	B–3	–
D911		C–3	③
D913		A–3	③
D915	A–2	A–2	–
D916	B–2	B–3	–
D917	A–2	A–3	–
D919	A–2	A–2	–
D921	E–3		③
D922	A–2		③
D923	A–2		③
D924		E–2	③
D935	B–2		③
D1501	D–3		③
D1502	D–2		③
D1503	D–2		③

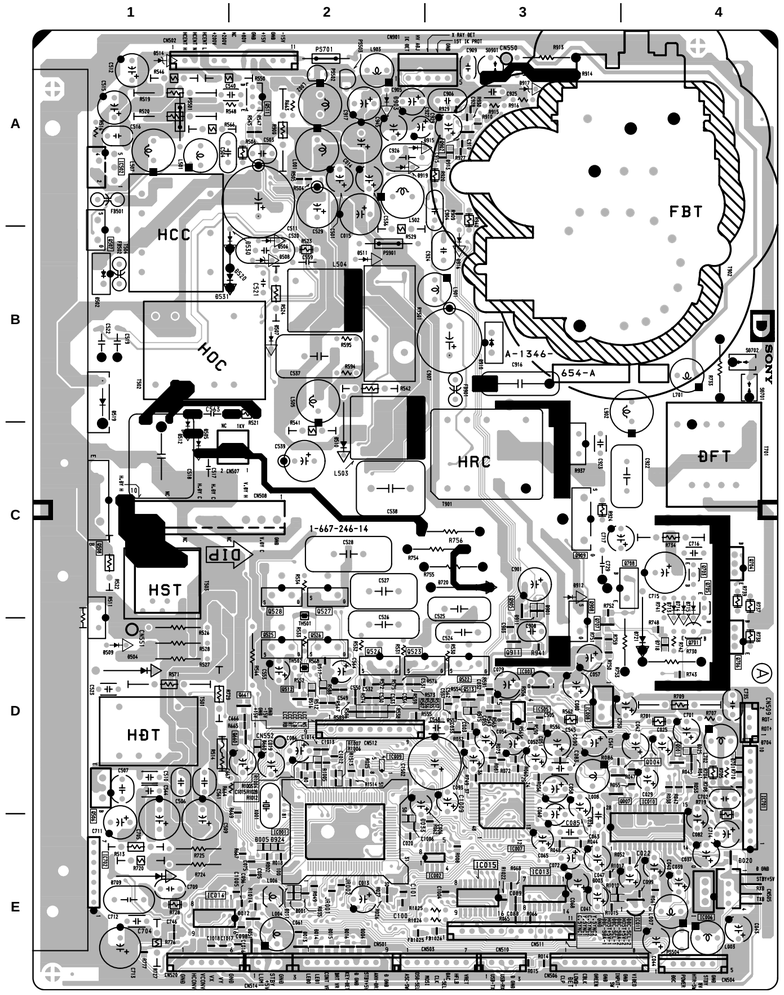
CRYSTAL

	(Conductor Side)	(Component Side)
X001	D–3	D–2

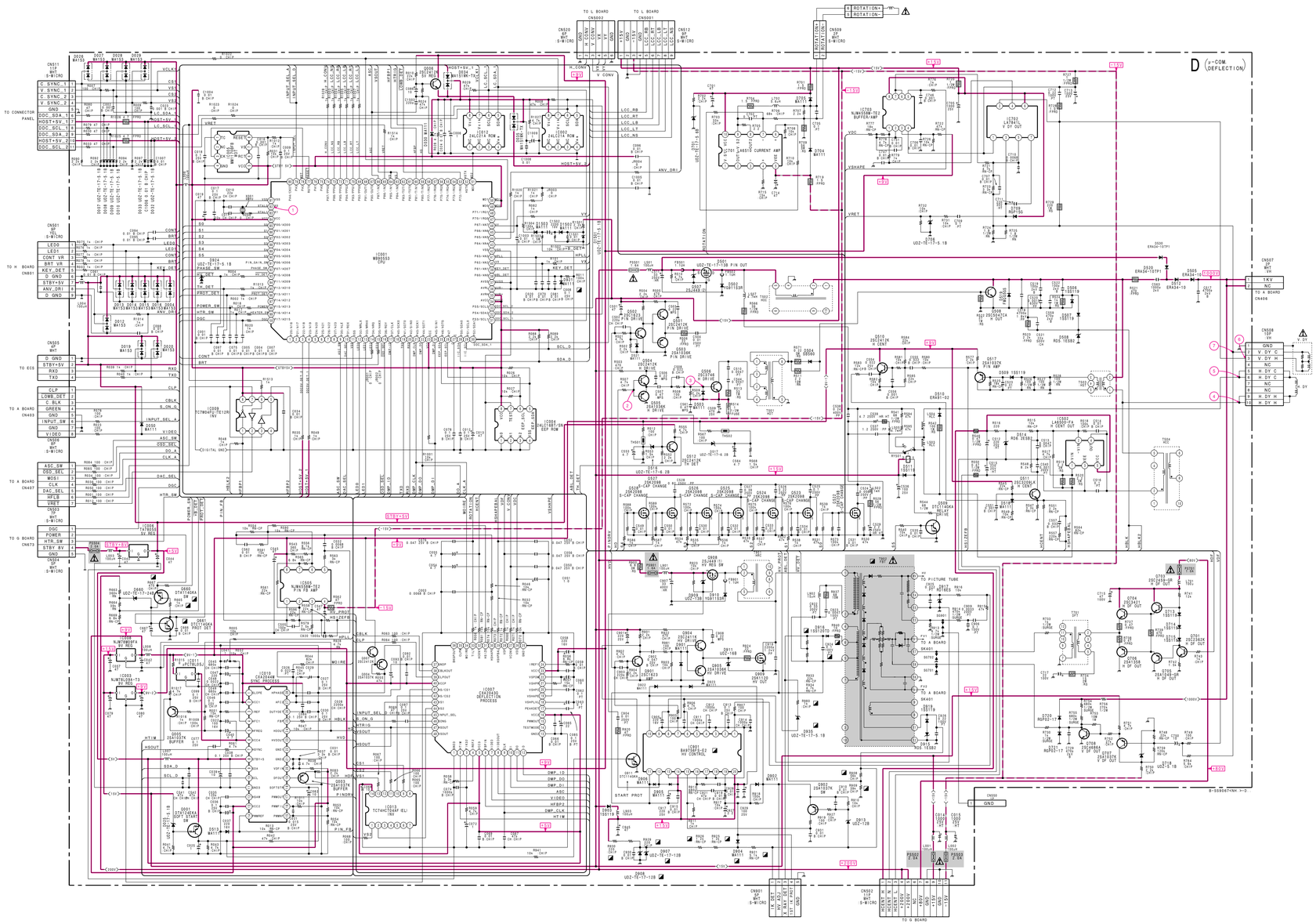
✻: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-9)

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

— D BOARD (Component Side) —



(1) Schematic Diagram of D Board



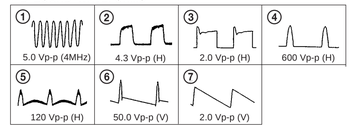
5-13

5-14

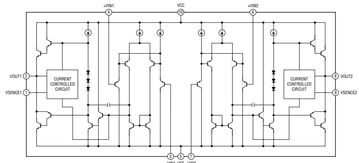
5-15

5-16

• D BOARD WAVEFORMS

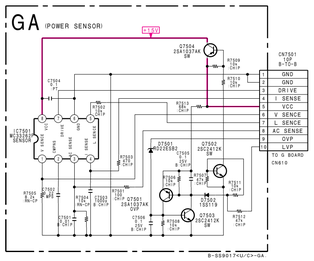


• D BOARD IC701 LA6510



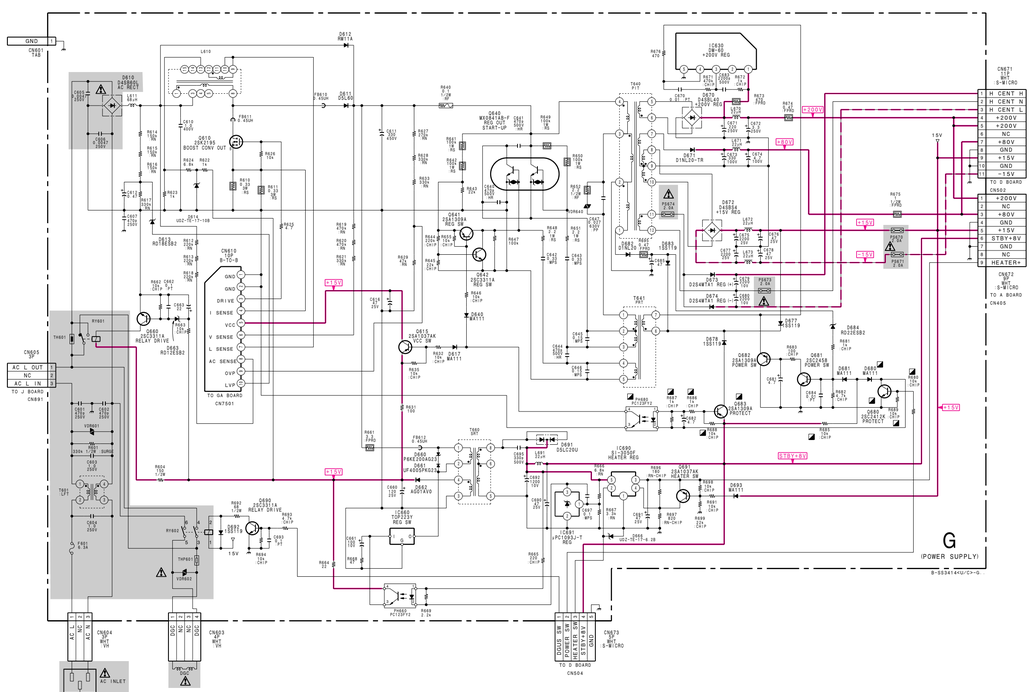
• D BOARD VOLTAGE LIST

Ref.	Pin No.	Voltage [V]	Ref.	Pin No.	Voltage [V]
IC002	5	1.1		11	0
	6	4.2		12	11.2
	7	0		15	0
				16	8.4
IC004	5	4.8		19	9.2
	6	4.8			
IC005	1	0.4	Q003	B	5.1
	3	0		C	0
	7	1.5		E	5.7
	8	4.8	Q005	B	2.5
IC009	1	−0.1		C	0
	2	4.7		E	3.1
	3	4.5	Q501	B	11.2
	5	0.3		C	13.8
	6	0.3		E	10.8
	7	4.5	Q502	B	0.2
IC010	1	4.0		C	11.2
	3	3.0	Q503	B	11.2
	4	2.8		E	10.9
	5	2.3	Q504	B	2.5
	6	2.6		C	12.0
	7	0.6		E	2.5
	9	4.8	Q505	B	2.5
	10	4.8		E	2.4
	12	5.4	Q506	B	−14.0
	14	4.5		C	−0.2
	15	4.5		E	−14.0
	16	5.4	Q507	G	197.4
	17	1.0		D	41.8
	18	0	Q508	B	−1.4
	19	5.1		C	41.0
	20	3.7	Q509	B	0
	23	0.8		C	14.1
	24	2.5	Q510	B	4.5
	25	−0.1		E	3.9
	26	4.0	Q511	B	3.2
	27	4.0		C	33.5
	28	4.4		E	2.6
IC012	5	0.6	Q517	B	4.6
	6	3.9		E	5.1
	7	4.1	Q522	G	0
IC013	1	0		D	15.2
	2	4.9	Q523	G	4.7
	8	0.6		D	0
	9	3.6	Q524	G	4.7
	10	4.9		D	0
	11	0	Q525	G	4.7
	13	5.7		D	0
IC014	1	3.5	Q527	G	4.7
	3	3.5		D	0
	5	2.7	Q528	G	4.7
	7	0		D	0
	10	0.1	Q660	B	4.2
	12	4.9		C	0
	13	4.9		E	4.2
	14	3.2	Q661	B	0
	15	3.9		C	4.2
IC015	1	0.5	Q701	B	5.7
	2	4.2		C	36.0
	3	0.5		E	5.1
	4	0.5	Q703	B	37.9
	5	0		E	37.4
	6	0	Q704	B	37.4
	8	0		E	37.0
	9	0	Q705	B	36.0
	13	0		E	36.6
IC502	1	41.4	Q706	B	36.6
	2	41.4		E	37.0
	3	33.7	Q707	B	−0.6
	4	42.3		C	−5.0
	5	48.3		E	0
IC505	1	4.5	Q708	B	0.6
	2	0		C	477.0
	3	0	Q901	B	0.1
	5	0		C	9.9
	6	0	Q902	B	9.0
	7	−10.0		C	0
IC701	1	14.2		E	9.0
	2	14.2	Q904	B	8.6
	3	0		C	13.0
	4	3.6		E	8.4
	6	3.0	Q905	B	8.6
	7	3.0		E	8.4
	8	−0.7	Q908	G	196.6
	9	−0.7		D	40.1
IC702	2	0.4	Q909	G	8.4
	3	13.5		D	40.4
	4	1.2			
	5	1.2			
	7	−13.0			
IC703	1	1.2			
	2	1.6			
	3	1.6			
	5	2.8			
	6	2.8			
	7	2.8			
IC901	1	9.3			
	2	5.6			
	4	5.0			
	6	1.1			
	7	0.9			
	8	9.3			
	10	0			



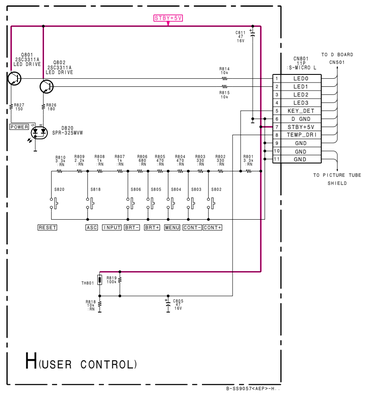
• GA BOARD
VOLTAGE LIST

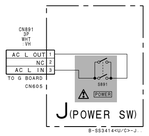
Ref.	Pin No.	Voltage [V]
IC7501	1	2.6
	2	2.5
	3	1.7
	4	0.2
	5	0
	7	8.6
Q7501	B	14.0
	C	0
	E	14.0
Q7502	B	0.7
	C	0.1
Q7503	B	0
	C	14.0
Q7504	B	13.4



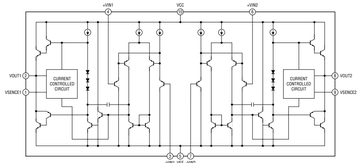
• G BOARD
VOLTAGE LIST

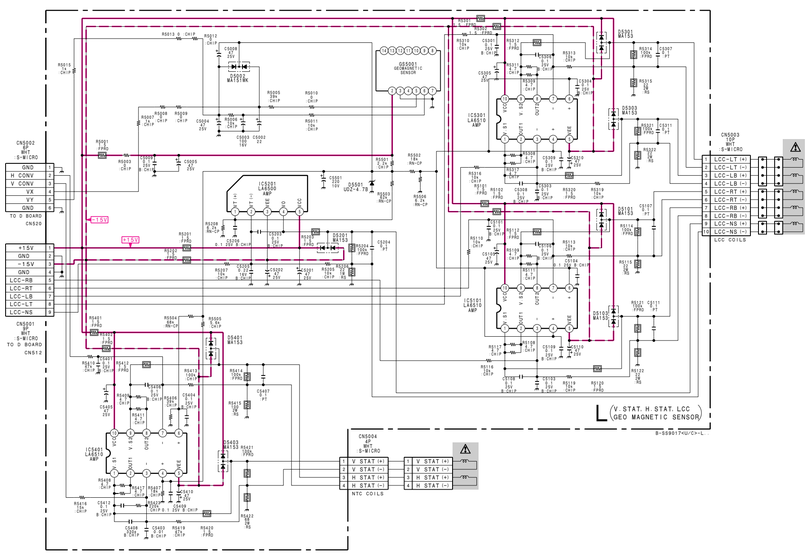
Ref.	Pin No.	Voltage [V]
IC630	3	2.5
	4	11.6
IC660	IN	6.1
	OUT	410.0
IC690	2	5.0
	3	6.7
	4	5.3
PH660	1	4.5
	2	3.3
	3	6.1
	4	16.7
PH680	1	1.3
	2	0.1
	3	0
	4	0.1
Q610	G	8.7
	D	102.4
	S	0.2
Q615	B	13.6
	C	14.2
	E	14.3
Q640	B1	–2.0
	C1	199.2
	B2	196.8
	C2	408.0
	E2	199.2
Q641	B	1.1
	C	–2.0
	E	2.0
Q642	B	–1.8
	C	–2.0
Q660	B	0.9
	C	0.3
Q680	B	0.8
	C	0
Q681	B	0.3
	C	11.7
Q682	B	11.7
	E	11.7
Q683	B	7.5
	C	8.3
Q690	B	0
	C	15.0
Q691	B	8.6
	C	5.3
	E	6.7





• L BOARD IC5101, 5301, 5401 LA6510





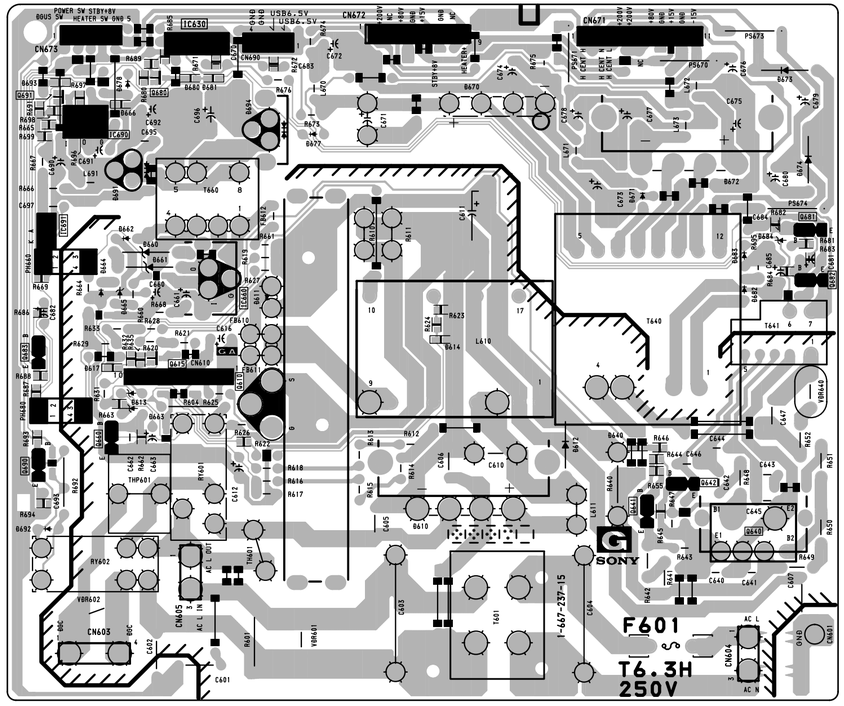
• L BOARD
VOLTAGE LIST

Ref.	Pin No.	Voltage [V]
GS5001	5	2.8
	6	2.8
IC5101	1	1.0
	2	1.0
	3	1.2
	4	1.2
	6	1.2
	7	1.2
	8	–0.2
	9	–0.2
IC5201	1	1.2
	2	1.2
	4	1.1
IC5301	1	–0.2
	2	–0.2
	3	1.2
	4	1.2
	6	1.2
	7	1.2
	8	0.4
	9	0.4
IC5401	1	0.6
	2	0.6
	3	3.4
	4	3.4
	6	1.8
	7	1.8
	8	0.4
	9	0.4

Schematic diagram
← D board

Schematic diagrams
G GA H
J L boards →

— G BOARD —

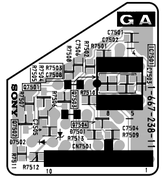


G BOARD
Terminal name of semiconductors in silk screen printed circuit (∗)

Ref.	∗
Q615, Q680, Q691	①
D614, D617, D640, D680, D681, D693	③

∗: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-9)

— GA BOARD —

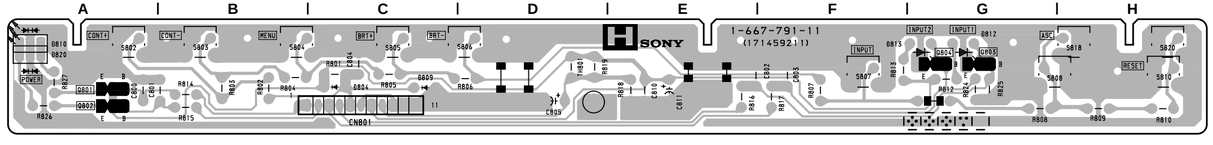


GA BOARD
Terminal name of semiconductors in silk screen printed circuit (∗)

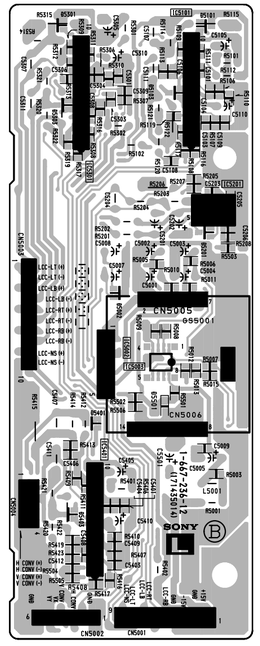
Ref.	∗
Q7501–Q7504	①

∗: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-9)

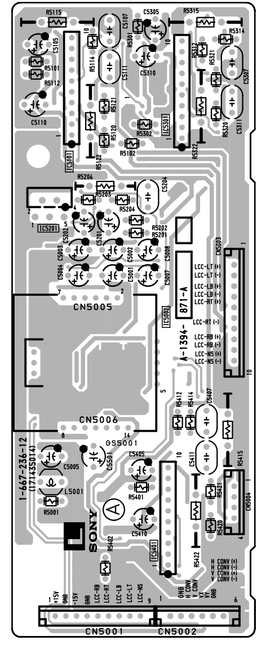
— H BOARD —



— L BOARD (Conductor Side) —



— L BOARD (Component Side) —



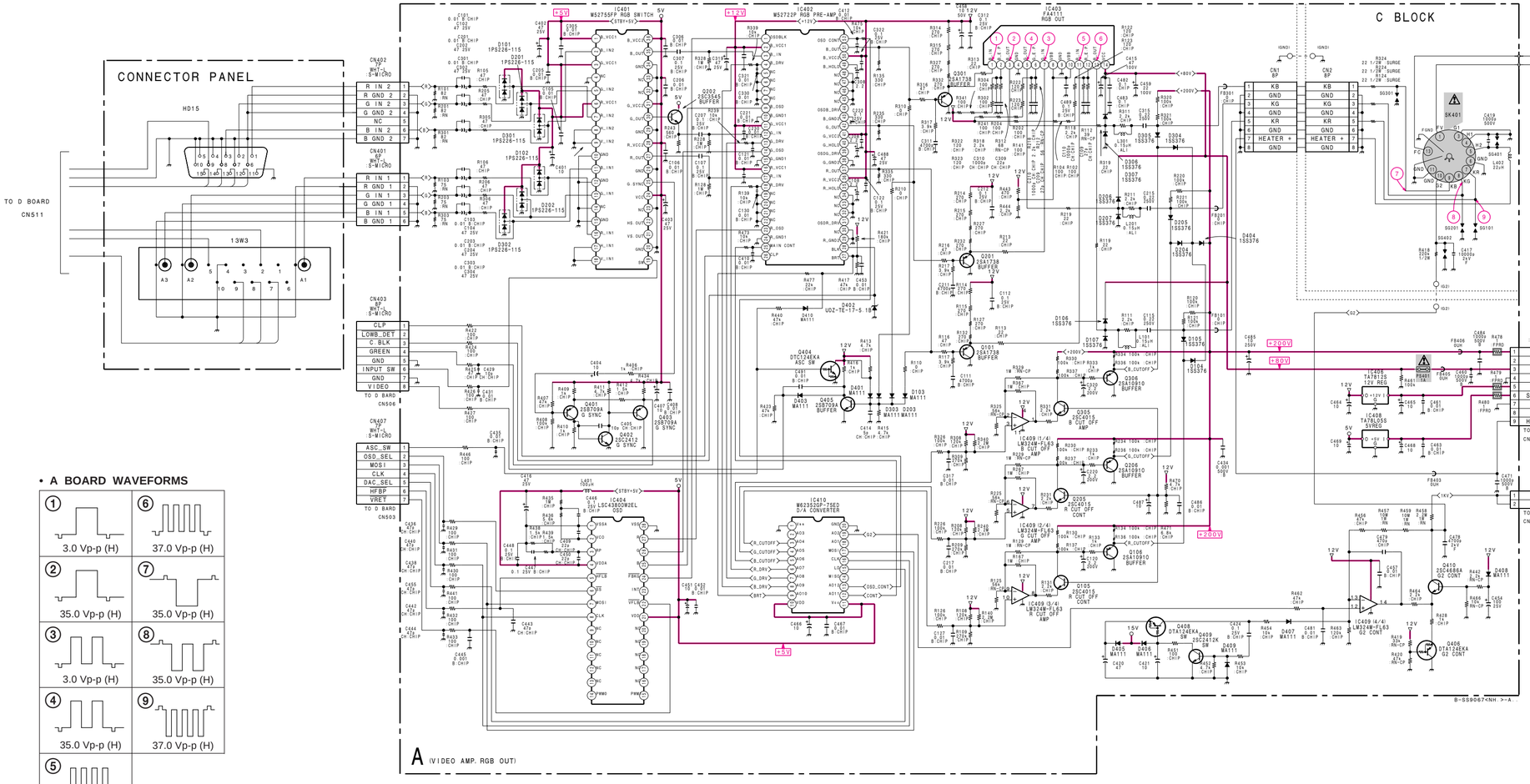
L BOARD
Terminal name of semiconductors in silk screen printed circuit (∗)

Ref.	∗
D5501	③
D5101, D5103, D5201, D5301, D5303, D5401, D5403	⑥
D5002	⑧

∗: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-9)

Schematic diagram
A board ➡

(3) Schematic Diagram of A Board



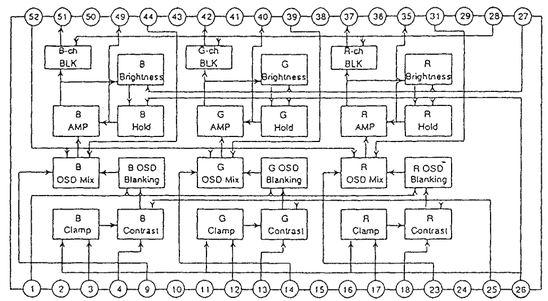
• A BOARD WAVEFORMS

①	3.0 Vp-p (H)	⑥	37.0 Vp-p (H)
②	35.0 Vp-p (H)	⑦	35.0 Vp-p (H)
③	35.0 Vp-p (H)	⑧	35.0 Vp-p (H)
④	35.0 Vp-p (H)	⑨	37.0 Vp-p (H)
⑤	3.0 Vp-p (H)		

• A BOARD VOLTAGE LIST

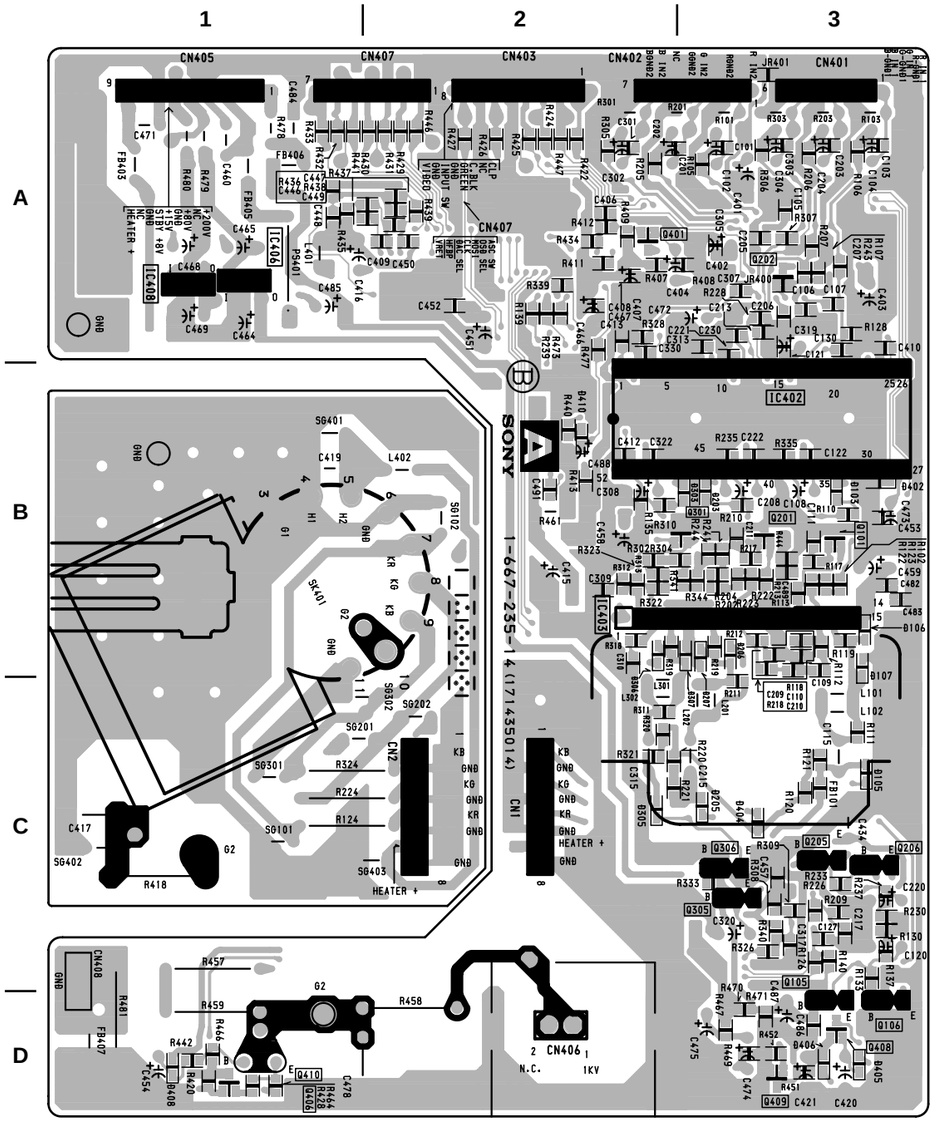
Ref.	Pin No.	Voltage [V]	Ref.	Pin No.	Voltage [V]
IC402	1	1.1		E	6.8
	3	2.8	Q106	B	112.6
	4	3.7		E	113.3
	9	1.1	Q201	B	2.7
	12	2.8		E	3.5
	13	3.8	Q205	B	7.4
	14	1.1		C	109.9
	17	2.8		E	6.8
	18	3.9	Q206	B	109.9
	23	1.1		E	110.4
	25	3.3	Q301	B	2.7
	26	0.7		E	3.4
	27	2.4	Q305	B	7.4
	28	1.2		C	113.1
	35	4.4		E	6.8
	37	2.7	Q306	B	113.1
	40	4.4		E	113.7
	42	2.7	Q401	B	3.6
	49	4.4		C	0.7
	51	2.7		E	4.3
	52	2.1	Q406	B	7.9
IC403	1	3.4		E	9.0
	2	2.8	Q410	B	9.7
	3	53.6		C	484.0
	5	52.7		E	9.1
	6	2.9	SK401	KR	87.0
	7	3.4		KG	87.0
	8	9.8		KB	87.0
	10	9.8		G2	474.0
	11	3.5		H2	6.5
	12	2.9			
	13	52.3			
Q101	B	2.8			
	E	3.5			
Q105	B	7.3			
	C	112.6			

• A BOARD IC402 M52722P



A VIDEO AMP RGB OUT

— A BOARD (Conductor Side) —



• A BOARD SEMICONDUCTOR LOCATION

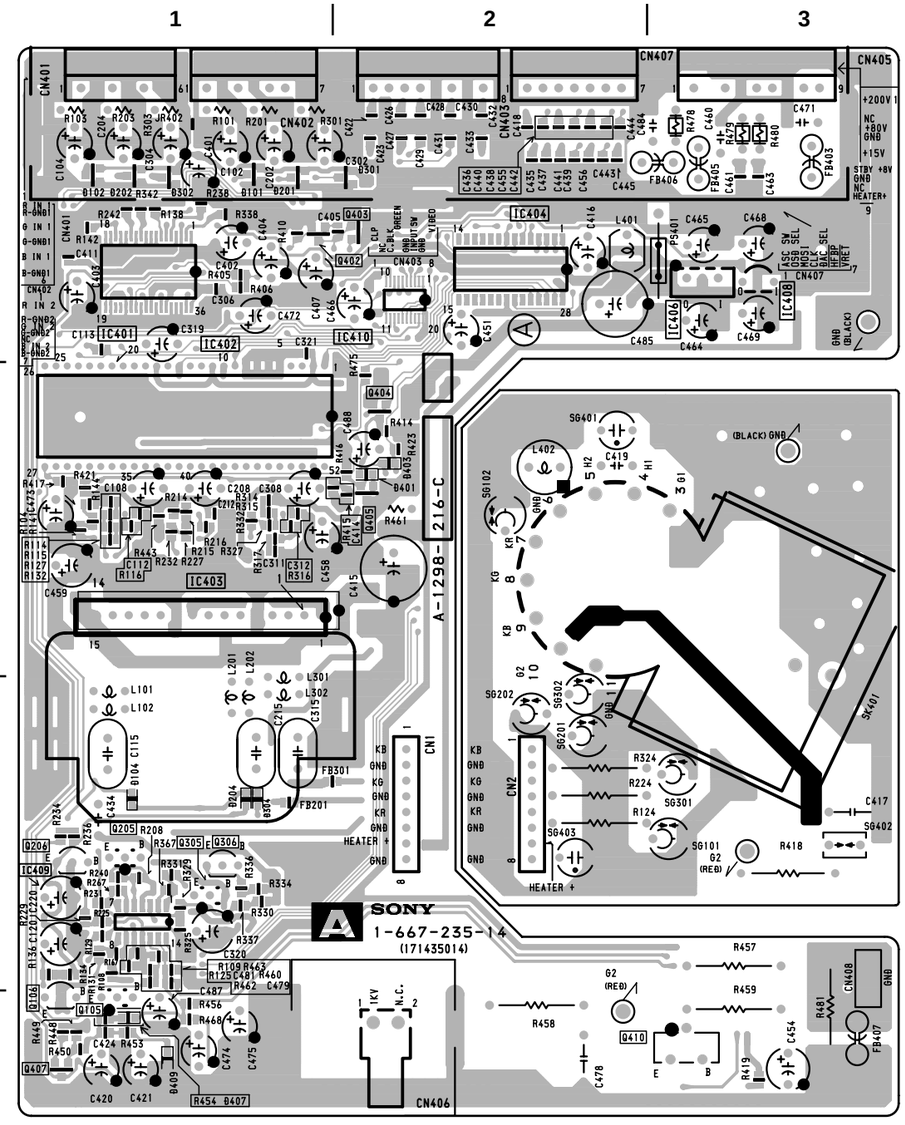
IC	(Conductor Side)	(Component Side)
IC401		A–1
IC402	B–3	B–1
IC403	B–3	B–1
IC404		A–2
IC406	A–1	A–3
IC408	A–1	A–3
IC409		C–1
IC410		A–2

TRANSISTOR	(Conductor Side)	(Component Side)	∗
Q101	B–3		①
Q105	D–3	D–1	–
Q106	D–3	D–1	–
Q201	B–3		①
Q202	A–3		①
Q205	C–3	C–1	–
Q206	C–3	C–1	–
Q301	B–3		①
Q305	C–3	C–1	–
Q306	C–3	C–1	–
Q401	A–2		①
Q402		A–1	②
Q403		A–2	②
Q404		B–2	②
Q405		B–2	②
Q406	D–1		①
Q407		D–1	②
Q408	D–3		①
Q409	D–3		①
Q410	D–1	D–3	–

DIODE	(Conductor Side)	(Component Side)	∗
D101		A–1	⑦
D102		A–1	⑦
D103	B–3		③
D104		C–1	③
D105	C–3		③
D106	B–3		③
D107	B–3		③
D201		A–1	⑦
D202		A–1	⑦
D203	B–3		③
D204		C–1	③
D205	C–3		③
D206	B–3		③
D207	B–3		③
D301		A–2	⑦
D302		A–1	⑦
D303	B–3		③
D304		C–1	③
D305	C–2		③
D306	B–2		③
D307	B–3		③
D401		B–2	③
D402	B–3		③
D404	C–3		③
D405	D–3		③
D406	D–3		③
D407		D–1	③
D408	D–1		③
D409		D–1	③
D410	B–2		③

∗: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-9)

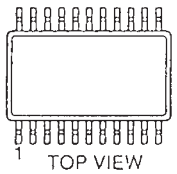
— A BOARD (Component Side) —



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

5-4. SEMICONDUCTORS

BA9756FS-E2
M62352GP-75E
M62352GP-75ED



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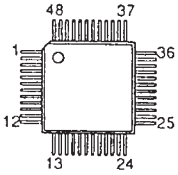

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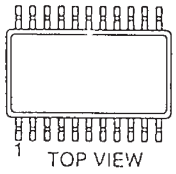
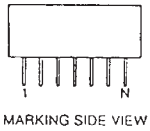
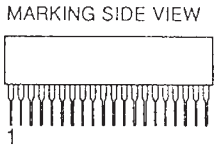
LSC4380DW2EL



DM-60



FA4111



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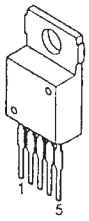

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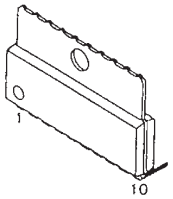

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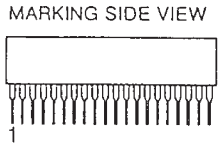

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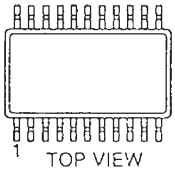
TC74HCT04AF



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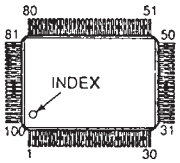

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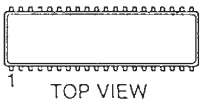

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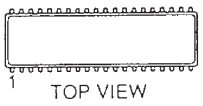

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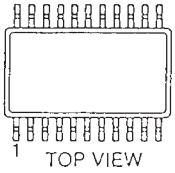

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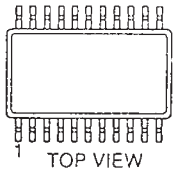
24LC21A/SN



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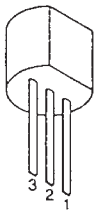
NJM78L09A
TA78L05S
TA78L09S



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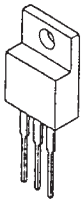
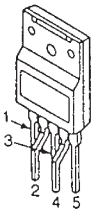


SI-3050F



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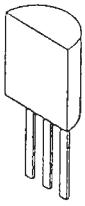

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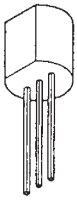

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DTA124EKA-T146
DTC114GKA
DTC114GKAT146
DTC124EK
DTC124EKA-T146
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2SA1036K-T-146-Q
2SA1037AK-T146-QR
2SA1037AK-T146-R
2SA1037K-T-146-QR
2SA1162G
2SA1462-Y33
2SA1738-TX
2SB709A-QRS-TX
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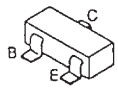

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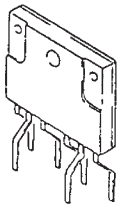

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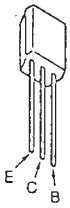

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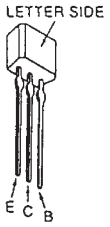

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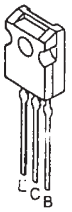

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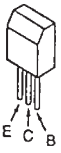

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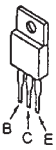
2SC4686A (LBSONY)
2SJ449
2SJ449 (1)
2SJ449 (2)



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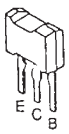

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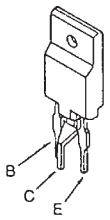

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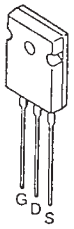
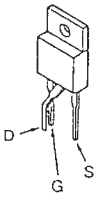
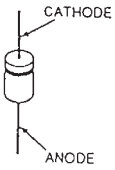


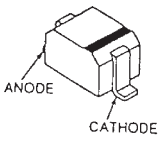
2SK2195F04



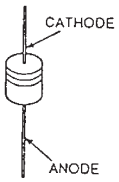
AG01A-V0
ERA91-02
S2LA20F



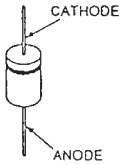
DTZ-TT11-16B
DTZ10B
DTZ13B
DTZ24B
DTZ33B
DTZ4.7C
DTZ5.1B
MA111
RD12SB2
RD5.6SB
UDZ-TE-17-10B
UDZ-TE-17-12B
UDZ-TE-17-13B
UDZ-TE-17-16B
UDZ-TE-17-24B
UDZ-TE-17-33B
UDZ-TE-17-4.7B
UDZ-TE-17-5.1B
UDZ-TE-17-5.6B
UDZ-TE-17-6.2B
UDZ-TE-17-7.5B



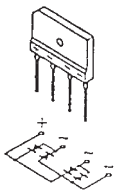
D1NL20-TR
GMA01
RD12ES-B2
RD16ES-B2
RD16ES-B3
RD18ES-B2
RD22ES-B2
RD5.1ES-B2
RD6.2ESB2
1SS119-25TD
1SS119-25
1SS120TD



D2S4MF
D2S4MTA1

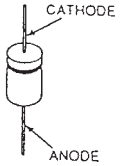


D4SBS4
D4SBS4-F
D4SBL40
D4SB60L

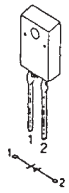


D5LC20U

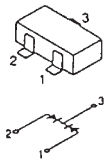
EGP20G
ERA34-10
RGP02-17EL-6433
RGP02-17PKG23
RGP02-20EG23
RGP02-20EL-6394
RGP15GPKG23
UF4005PKG23



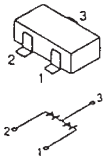
FMQ-G5GS
D5L60



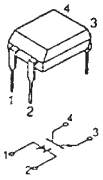
MA151WK
1SS184



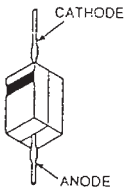
MA153
1SS226



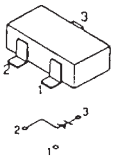
PC123F2
PC123FY2



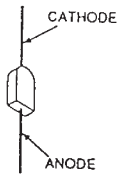
P6KE200AG23



RD6.2M-B1

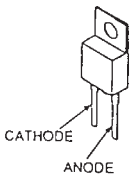


RM11A
RM11C

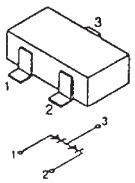


SB560

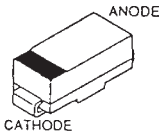
YG911S3R



1PS226-115



1SS376TE-17



SECTION 6
EXPLODED VIEWS

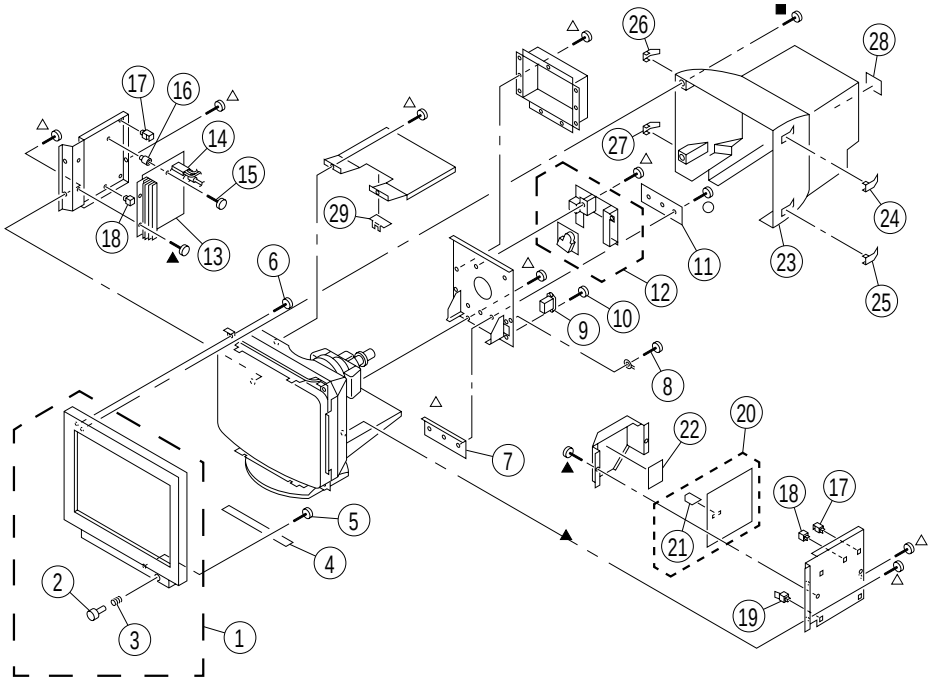
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

6-1. CHASSIS

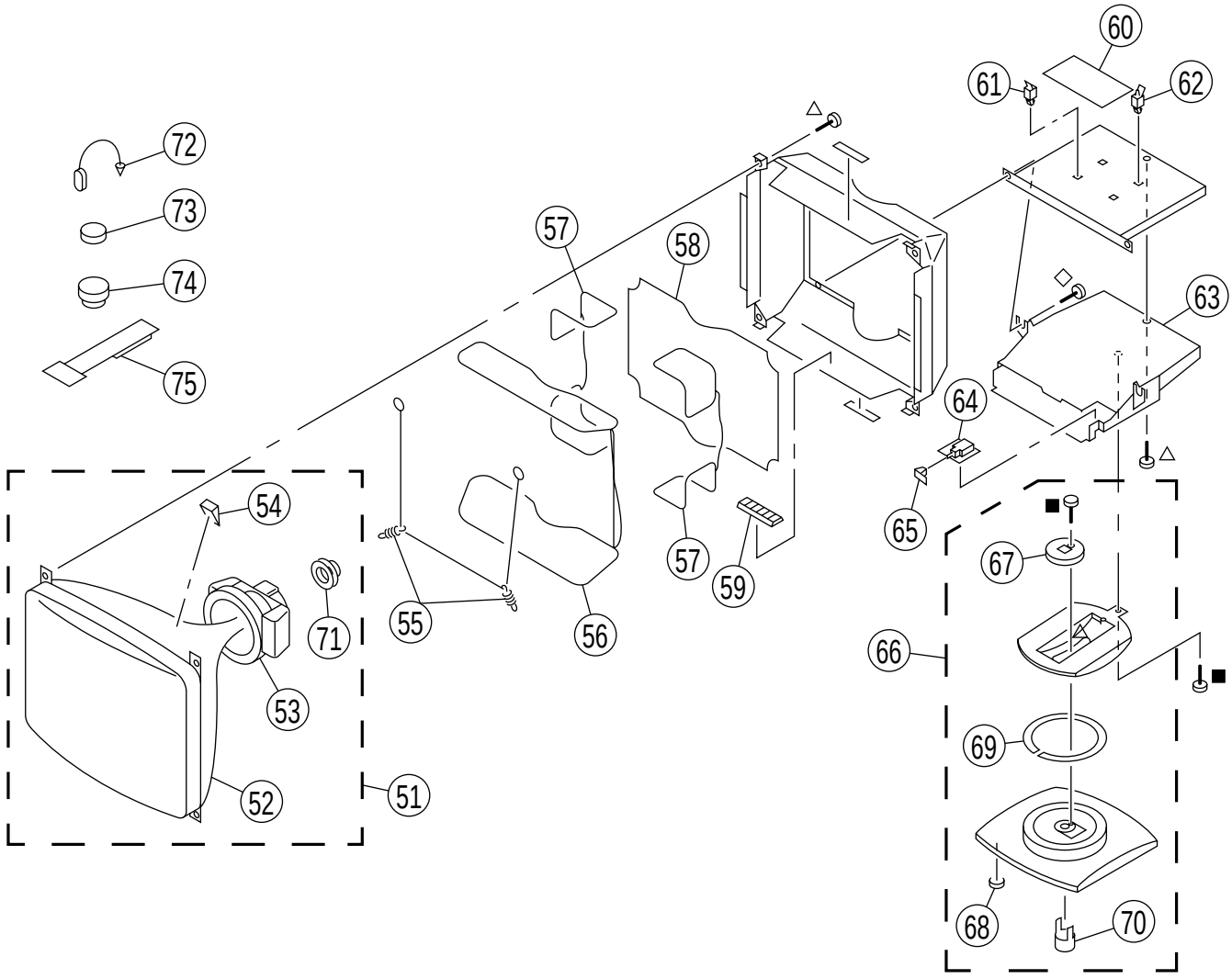
▲ 7-685-647-79 +BVTP 3X10
■ 7-685-663-71 +BVTP 4X16
○ 7-685-872-09 +BVTT 3X8
△ 7-685-881-09 +BVTT 4X8



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4035-342-1	BEZEL ASSY [03N/03S]	2.3
1	X-4035-486-1	BEZEL ASSY [43N/43S]	2.3
2	4-063-129-01	BUTTON, POWER	
3	3-653-339-01	SPRING, COMPRESSION	
4	* 8-933-283-00	H BOARD, COMPLETE	
5	4-029-432-01	SCREW (3×12), (+) BVWHTP	
6	4-365-808-01	SCREW (5), TAPPING	
7	1-694-381-11	TREMINAL BOARD ASSY, I/O	
8	4-389-025-01	SCREW (M4) (EXT TOOTH WASHER)	
9	⚠ 1-251-382-12	INLET, AC 3P (WITH NOISE FILTE)	
10	4-052-345-01	SCREW, (3×8) (+K), TAPPING	
11	* 4-063-091-01	SHEET, CONNECTOR	
12	* 8-933-306-00	A BOARD, COMPLETE	
13	* 8-933-307-00	D BOARD, COMPLETE	
14	⚠ X-4035-170-1	TRANSFOMER ASSY, FLYBACK (NX-4142//J1D4)	
15	4-062-115-01	SCREW +P 3.5×20 TYPE2	
16	* 4-060-359-01	HOLDER, PRINTED CIRCUIT BOARD	
17	* 3-701-903-11	HOLDER, PRINTED CIRCUIT BOARD	
18	* 4-382-848-01	HOLDER, PRINTED CIRCUIT BOARD	
19	* 3-703-141-00	HOLDER, PRINTED CIRCUIT BOARD	
20	* 8-933-277-00	G BOARD, COMPLETE	21
21	* 8-933-269-00	GA BOARD, COMPLETE	
22	* 4-061-494-01	SHEET, INSULATE	
23	X-4035-382-1	CABINET ASSY [03N/03S]	
23	X-4035-488-1	CABINET ASSY [43N/43S]	
24	4-063-133-01	COVER (RIGHT UPPER), SCREW [03N/03S]	
24	4-063-133-11	COVER (RIGHT UPPER), SCREW [43N/43S]	
25	4-063-135-01	COVER (RIGHT LOWER), SCREW [03N/03S]	
25	4-063-135-11	COVER (RIGHT LOWER), SCREW [43N/43S]	
26	4-063-134-01	COVER (LEFT UPPER), SCREW [03N/03S]	
26	4-063-134-11	COVER (LEFT UPPER), SCREW [43N/43S]	
27	4-063-136-01	COVER (LEFT LOWER), SCREW [03N/03S]	
27	4-063-136-11	COVER (LEFT LOWER), SCREW [43N/43S]	
28	* 4-064-137-01	LABEL, INFORMATION [03N]	
28	* 4-064-137-11	LABEL, INFORMATION [03S]	
28	* 4-064-137-21	LABEL, INFORMATION [43N]	
28	* 4-064-137-31	LABEL, INFORMATION [43S]	
29	4-063-711-01	SUPPORT, HV CABLE	

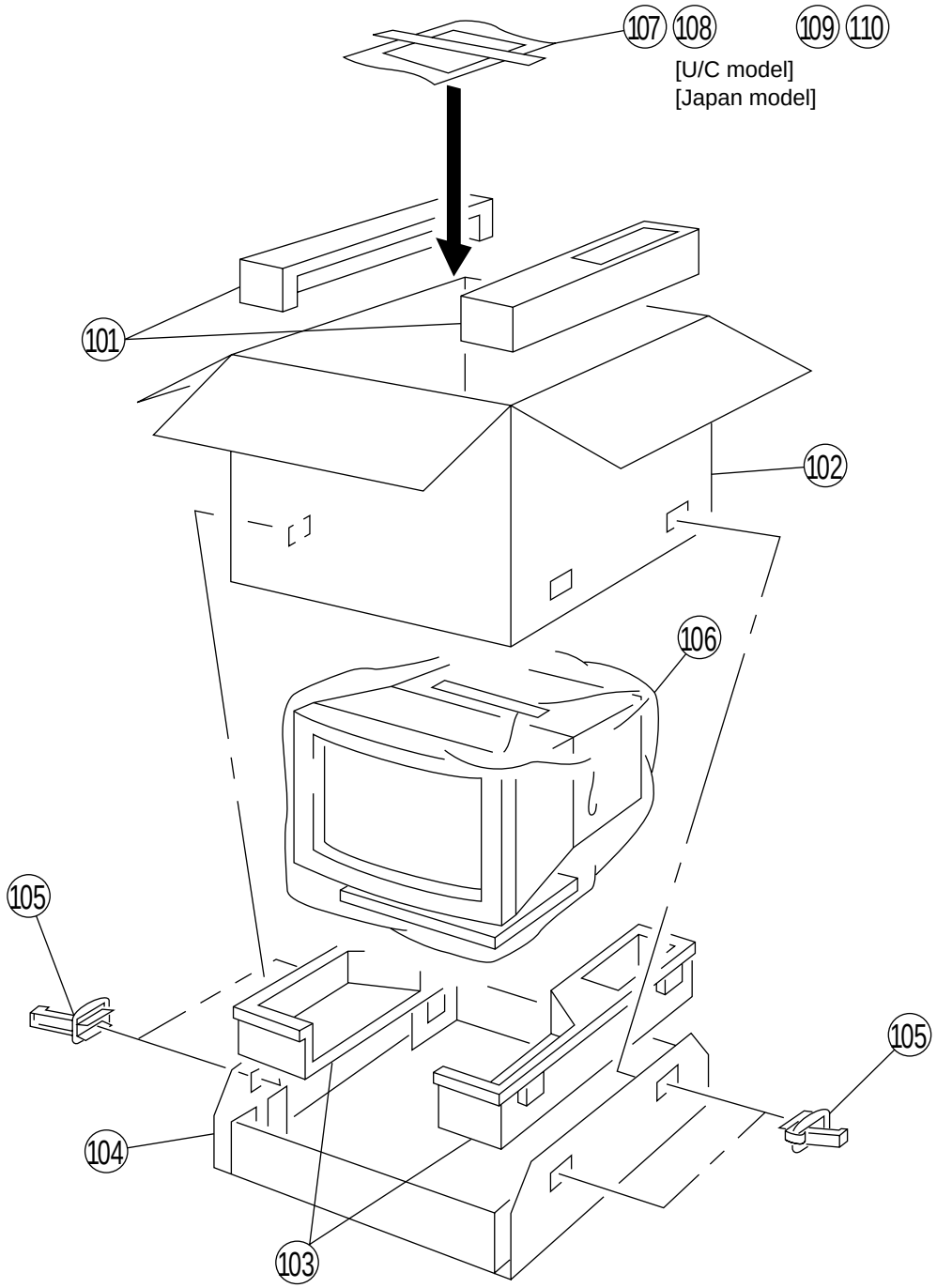
6-2. PICTURE TUBE

■ 7-685-663-71 +BVTP 4X16
△ 7-685-881-09 +BVTT 4X8
◇ 7-685-883-01 +BVTT 4X12



REF.NO.	PART NO.	DESCRIPTION	REMARK
51	⚠ 8-738-796-81	ITC ASSY (21SRG-R2) [03N/43N]	52-54, 71
51	⚠ 8-738-799-81	ITC ASSY (21SRG-RS2) [03S/43S]	52-54, 71
52	⚠ 8-738-796-00	PICTURE TUBE (21SRG) [03N/43N Japan model]	
52	⚠ 8-738-796-05	PICTURE TUBE (21SRG) [03N/43N U/C, AEP model]	
52	⚠ 8-738-799-05	PICTURE TUBE (21SRG) [03S/43S]	
53	⚠ 8-451-493-31	DEFLECTION YOKE (Y21SRL-M3)	
54	4-050-492-01	SPACER, DY	
55	* 4-047-316-01	SPRING, TENSION	
56	⚠ 1-416-437-11	COIL, DEMAGNETIC	
57	⚠ 1-416-140-21	COIL, LANDING CORRECTION	
58	⚠ 1-416-438-21	COIL, LANDING CORRECTION	
59	4-062-670-03	SPACER, PICTURE TUBE	
60	* 8-933-263-00	L BOARD, COMPLETE	
61	* 4-321-929-00	HOLDER, PRINTED CIRCUIT BOARD	
62	* 3-703-141-00	HOLDER, PRINTED CIRCUIT BOARD	
63	* 4-061-603-31	COVER, BOTTOM [03N/03S]	
63	* 4-061-603-51	COVER, BOTTOM [43N/43S]	
64	* 8-933-279-00	J BOARD, COMPLETE	
65	* 4-394-972-21	CAP, POWER	
66	X-4035-384-1	STAND ASSY [03N/03S]	67-70
66	X-4035-590-2	STAND ASSY [43N/43S]	67-70
67	4-061-396-01	STOPPER (A)	
68	4-047-474-01	FOOT, RUBBER	
69	4-060-339-01	RING, TILT SWIVEL	
70	4-062-381-01	STOPPER (B)	
71	⚠ 1-452-932-11	NECK ASSEMBLY, PICTURE TUBE	
72	4-308-870-00	CLIP, LEAD WIRE	
73	1-452-032-00	MAGNET, DISK:10mmϕ	
74	1-452-094-00	MAGNET, ROTATABLE DISK:15mmϕ	
75	4-059-493-01	PERMALLOY (90), CONV.CORRECT	

6-3. PACKING MATERIALS



REF.NO.	PART NO.	DESCRIPTION	REMARK
101	4-062-988-01	CUSHION (UPPER) (ASSY)	
102	4-062-987-01	INDIVIDUAL CARTON	
103	4-062-990-01	CUSHION (LOWER) (ASSY)	
104	*4-061-815-01	TRAY	
105	4-396-077-01	JOINT	
106	4-063-578-01	BAG, PROTECTION [43N/43S]	
106	4-063-577-01	BAG, POLYETHTLENE [03N/03S]	
107	1-783-247-11	CABLE ASSY [03N/03S]	
107	1-783-250-11	CABLE ASSY [43N/43S]	
108	⚠1-783-507-11	CORD SET, POWER (10A/125V)	[43N U/C model]
108	⚠1-783-507-21	CORD SET, POWER (10A/125V)	[03N U/C model]
108	⚠1-783-507-11	CORD SET, POWER (10A/125V)	[43N U/C model]
108	⚠1-783-533-11	CORD SET, POWER (...A/...V)	[Japan model]
109	3-862-438-11	MANUAL, INSTRUCTION	[except Japan model]
109	3-862-438-01	MANUAL, INSTRUCTION [Japan model]	
110	4-063-796-01	MONITOR INFORMATION DISK (IBM)	

SECTION 7
ELECTRICAL PARTS LIST

A

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- CAPACITORS
  MF : µF
- COILS
  UH : µH

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*8-933-306-00	A BOARD, COMPLETE			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+) (IC403)			
	<CAPACITOR>				
C101	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C102	1-104-664-11	ELECT 47MF	20%	25V	
C103	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C104	1-104-664-11	ELECT 47MF	20%	25V	
C105	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C106	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C107	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C108	1-107-903-11	ELECT 2.2MF	20%	50V	
C109	1-163-237-11	CERAMIC CHIP 27PF	5%	50V	
C110	1-163-275-11	CERAMIC CHIP 0.001MF	5%	50V	
C111	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	
C112	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C115	1-104-514-11	FILM 0.22MF	10%	250V	
C120	1-107-949-11	ELECT 2.2MF	20%	200V	
C121	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C122	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C127	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C130	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C201	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C202	1-104-664-11	ELECT 47MF	20%	25V	
C203	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C204	1-104-664-11	ELECT 47MF	20%	25V	
C205	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C206	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C207	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C208	1-107-903-11	ELECT 2.2MF	20%	50V	
C209	1-163-237-11	CERAMIC CHIP 27PF	5%	50V	
C210	1-163-275-11	CERAMIC CHIP 0.001MF	5%	50V	
C211	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	
C212	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C215	1-104-514-11	FILM 0.22MF	10%	250V	
C217	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C220	1-107-949-11	ELECT 2.2MF	20%	200V	
C221	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C222	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C230	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C301	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C302	1-104-664-11	ELECT 47MF	20%	25V	
C303	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C304	1-104-664-11	ELECT 47MF	20%	25V	
C305	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C306	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C307	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C308	1-107-903-11	ELECT 2.2MF	20%	50V	
C309	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C310	1-163-275-11	CERAMIC CHIP 0.001MF	5%	50V	
C311	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	
C312	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C315	1-104-514-11	FILM 0.22MF	10%	250V	
C317	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C319	1-107-888-11	ELECT 47MF	20%	25V	
C320	1-107-949-11	ELECT 2.2MF	20%	200V	
C321	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C322	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C330	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C401	1-126-964-11	ELECT 10MF	20%	50V	
C402	1-104-664-11	ELECT 47MF	20%	25V	
C403	1-104-664-11	ELECT 47MF	20%	25V	
C404	1-126-964-11	ELECT 10MF	20%	50V	
C405	1-163-227-11	CERAMIC CHIP 10PF	0.5PF	50V	
C407	1-126-964-11	ELECT 10MF	20%	50V	
C408	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C409	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C410	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C412	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C414	1-163-239-11	CERAMIC CHIP 33PF	5%	50V	
C415	1-128-562-11	ELECT 47MF	20%	100V	
C416	1-104-664-11	ELECT 47MF	20%	25V	
C417	1-115-349-51	CERAMIC 0.01MF		2KV	
C419	1-162-318-11	CERAMIC 0.001MF	10%	500V	
C420	1-126-967-11	ELECT 47MF	20%	50V	
C421	1-126-964-11	ELECT 10MF	20%	50V	
C424	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C429	1-163-227-11	CERAMIC CHIP 10PF	0.5PF	50V	
C431	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C434	1-162-318-11	CERAMIC 0.001MF	10%	500V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
C435	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C436	1-163-243-11	CERAMIC CHIP 47PF 5% 50V	
C438	1-163-243-11	CERAMIC CHIP 47PF 5% 50V	
C440	1-163-243-11	CERAMIC CHIP 47PF 5% 50V	
C442	1-163-243-11	CERAMIC CHIP 47PF 5% 50V	
C443	1-163-243-11	CERAMIC CHIP 47PF 5% 50V	
C444	1-163-243-11	CERAMIC CHIP 47PF 5% 50V	
C445	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
C446	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C447	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C448	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C450	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
C451	1-126-964-11	ELECT 10MF 20% 50V	
C452	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C453	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C454	1-104-665-11	ELECT 100MF 20% 25V	
C455	1-163-243-11	CERAMIC CHIP 47PF 5% 50V	
C457	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C458	1-126-964-11	ELECT 10MF 20% 50V	
C459	1-107-930-91	ELECT 22MF 20% 100V	
C460	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C461	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C463	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C464	1-107-906-11	ELECT 10MF 20% 50V	
C465	1-107-906-11	ELECT 10MF 20% 50V	
C466	1-126-964-11	ELECT 10MF 20% 50V	
C467	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C468	1-126-964-11	ELECT 10MF 20% 50V	
C469	1-126-964-11	ELECT 10MF 20% 50V	
C471	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C478	1-115-350-51	CERAMIC 0.0047MF 2KV	
C479	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C481	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C482	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
C483	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
C484	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C485	1-107-652-11	ELECT 10MF 20% 250V	
C486	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C487	1-126-964-11	ELECT 10MF 20% 50V	
C488	1-104-664-11	ELECT 47MF 20% 25V	
C489	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C491	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	

<CONNECTOR>

CN401*	1-564-521-11	PLUG, CONNECTOR 6P	
CN402*	1-564-522-11	PLUG, CONNECTOR 7P	
CN403	1-564-523-11	PLUG, CONNECTOR 8P	
CN405	1-564-524-11	PLUG, CONNECTOR 9P	
CN406*	1-766-179-11	PIN, CONNECTOR (PC BOARD) 2P	
CN407*	1-564-522-11	PLUG, CONNECTOR 7P	

<DIODE>

D101	8-719-062-51	DIODE 1PS226-115	
D102	8-719-062-51	DIODE 1PS226-115	
D103	8-719-404-49	DIODE MA111	
D104	8-719-052-12	DIODE 1SS376TE-17	
D105	8-719-052-12	DIODE 1SS376TE-17	
D106	8-719-052-12	DIODE 1SS376TE-17	
D107	8-719-052-12	DIODE 1SS376TE-17	
D201	8-719-062-51	DIODE 1PS226-115	
D202	8-719-062-51	DIODE 1PS226-115	
D203	8-719-404-49	DIODE MA111	
D204	8-719-052-12	DIODE 1SS376TE-17	
D205	8-719-052-12	DIODE 1SS376TE-17	
D206	8-719-052-12	DIODE 1SS376TE-17	
D207	8-719-052-12	DIODE 1SS376TE-17	
D301	8-719-062-51	DIODE 1PS226-115	
D302	8-719-062-51	DIODE 1PS226-115	
D303	8-719-404-49	DIODE MA111	
D304	8-719-052-12	DIODE 1SS376TE-17	
D305	8-719-052-12	DIODE 1SS376TE-17	
D306	8-719-052-12	DIODE 1SS376TE-17	
D307	8-719-052-12	DIODE 1SS376TE-17	
D401	8-719-404-49	DIODE MA111	
D402	8-719-976-99	ZENER DIODE DTZ5.1B	
D403	8-719-404-49	DIODE MA111	
D404	8-719-052-12	DIODE 1SS376TE-17	
D405	8-719-404-49	DIODE MA111	
D406	8-719-404-49	DIODE MA111	
D407	8-719-404-49	DIODE MA111	
D408	8-719-404-49	DIODE MA111	
D409	8-719-404-49	DIODE MA111	
D410	8-719-404-49	DIODE MA111	

<FERRITE BEAD>

FB101	1-216-295-91	SHORT	0
FB201	1-216-295-91	SHORT	0
FB301	1-216-295-91	SHORT	0
FB403	1-412-911-31	FERRITE	0UH
FB405	1-412-911-31	FERRITE	0UH
FB406	1-412-911-31	FERRITE	0UH

<IC>

IC401	8-759-522-86	IC M52755FP-TP	
IC402	8-759-468-63	IC M52722P	
IC403	8-749-013-74	IC FA4111	
IC404	8-759-492-78	IC LSC4380DW2EL	
IC406	8-759-231-58	IC TA7812S	
IC408	8-759-239-14	IC TA78L05S	
IC409	8-759-502-82	IC LM324M	
IC410	8-759-635-27	IC M62352GP-75E	

<COIL>

L101	1-412-478-11	INDUCTOR	0.15UH
L201	1-412-478-11	INDUCTOR	0.15UH

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Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
L301	1-412-478-11	INDUCTOR	0.15UH		
L401	1-408-421-00	INDUCTOR	100UH		
L402	1-412-529-11	INDUCTOR	22UH		
		<IC LINK>			
PS401⚠	1-533-590-31	LINK, IC (1A/90V AC, 60V DC)			
		<TRANSISTOR>			
Q101	8-729-112-65	TRANSISTOR 2SA1462-Y33			
Q105	8-729-041-66	TRANSISTOR 2SC4015TV2			
Q106	8-729-200-17	TRANSISTOR 2SA1091-O			
Q201	8-729-112-65	TRANSISTOR 2SA1462-Y33			
Q202	8-729-107-31	TRANSISTOR 2SC3545-T43			
Q205	8-729-041-66	TRANSISTOR 2SC4015TV2			
Q206	8-729-200-17	TRANSISTOR 2SA1091-O			
Q301	8-729-112-65	TRANSISTOR 2SA1462-Y33			
Q305	8-729-041-66	TRANSISTOR 2SC4015TV2			
Q306	8-729-200-17	TRANSISTOR 2SA1091-O			
Q401	8-729-216-22	TRANSISTOR 2SA1162-G			
Q402	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q403	8-729-216-22	TRANSISTOR 2SA1162-G			
Q404	8-729-901-00	TRANSISTOR DTC124EK			
Q405	8-729-216-22	TRANSISTOR 2SA1162-G			
Q406	8-729-027-31	TRANSISTOR DTA124EKA-T146			
Q408	8-729-027-31	TRANSISTOR DTA124EKA-T146			
Q409	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q410	8-729-020-07	TRANSISTOR 2SC4686A(LBSONY)			
		<RESISTOR>			
R101	1-215-395-00	METAL	82	1%	1/4W
R102	1-216-025-91	RES,CHIP	100	5%	1/10W
R103	1-215-395-00	METAL	82	1%	1/4W
R104	1-216-025-91	RES,CHIP	100	5%	1/10W
R105	1-216-017-91	RES,CHIP	47	5%	1/10W
R106	1-216-017-91	RES,CHIP	47	5%	1/10W
R108	1-216-099-00	RES,CHIP	120K	5%	1/10W
R109	1-216-107-00	RES,CHIP	270K	5%	1/10W
R110	1-216-295-91	SHORT	0		
R111	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R112	1-216-617-11	METAL CHIP	39	0.50%	1/10W
R113	1-216-009-00	RES,CHIP	22	5%	1/10W
R114	1-216-035-00	RES,CHIP	270	5%	1/10W
R115	1-216-035-00	RES,CHIP	270	5%	1/10W
R116	1-216-017-91	RES,CHIP	47	5%	1/10W
R117	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R118	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R119	1-216-009-00	RES,CHIP	22	5%	1/10W
R120	1-216-097-91	RES,CHIP	100K	5%	1/10W
R121	1-216-097-91	RES,CHIP	100K	5%	1/10W
R122	1-216-027-00	RES,CHIP	120	5%	1/10W
R123	1-216-027-00	RES,CHIP	120	5%	1/10W
R124	1-219-497-11	CARBON	22	5%	1/2W
R125	1-216-693-11	METAL CHIP	56K	0.50%	1/10W
R126	1-216-097-91	RES,CHIP	100K	5%	1/10W
R127	1-216-035-00	RES,CHIP	270	5%	1/10W
R128	1-216-121-91	RES,CHIP	1M	5%	1/10W
R129	1-218-776-11	METAL CHIP	1M	0.50%	1/10W
R130	1-216-097-91	RES,CHIP	100K	5%	1/10W
R131	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R132	1-216-035-00	RES,CHIP	270	5%	1/10W
R133	1-216-049-91	RES,CHIP	1K	5%	1/10W
R134	1-216-097-91	RES,CHIP	100K	5%	1/10W
R135	1-216-037-00	RES,CHIP	330	5%	1/10W
R136	1-216-097-91	RES,CHIP	100K	5%	1/10W
R137	1-216-097-91	RES,CHIP	100K	5%	1/10W
R139	1-216-073-00	RES,CHIP	10K	5%	1/10W
R140	1-216-129-00	RES,CHIP	2.2M	5%	1/10W
R141	1-216-025-91	RES,CHIP	100	5%	1/10W
R144	1-216-295-91	SHORT	0		
R167	1-216-121-91	RES,CHIP	1M	5%	1/10W
R201	1-215-395-00	METAL	82	1%	1/4W
R202	1-216-025-91	RES,CHIP	100	5%	1/10W
R203	1-215-395-00	METAL	82	1%	1/4W
R204	1-216-025-91	RES,CHIP	100	5%	1/10W
R205	1-216-017-91	RES,CHIP	47	5%	1/10W
R206	1-216-017-91	RES,CHIP	47	5%	1/10W
R208	1-216-099-00	RES,CHIP	120K	5%	1/10W
R209	1-216-107-00	RES,CHIP	270K	5%	1/10W
R210	1-216-295-91	SHORT	0		
R211	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R212	1-216-621-11	METAL CHIP	56	0.50%	1/10W
R213	1-216-009-00	RES,CHIP	22	5%	1/10W
R214	1-216-035-00	RES,CHIP	270	5%	1/10W
R215	1-216-035-00	RES,CHIP	270	5%	1/10W
R216	1-216-017-91	RES,CHIP	47	5%	1/10W
R217	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R218	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R219	1-216-009-00	RES,CHIP	22	5%	1/10W
R220	1-216-097-91	RES,CHIP	100K	5%	1/10W
R221	1-216-097-91	RES,CHIP	100K	5%	1/10W
R222	1-216-027-00	RES,CHIP	120	5%	1/10W
R223	1-216-027-00	RES,CHIP	120	5%	1/10W
R224	1-219-497-11	CARBON	22	5%	1/2W
R225	1-216-693-11	METAL CHIP	56K	0.50%	1/10W
R226	1-216-097-91	RES,CHIP	100K	5%	1/10W
R227	1-216-035-00	RES,CHIP	270	5%	1/10W
R228	1-216-121-91	RES,CHIP	1M	5%	1/10W
R229	1-218-776-11	METAL CHIP	1M	0.50%	1/10W
R230	1-216-097-91	RES,CHIP	100K	5%	1/10W
R231	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R232	1-216-035-00	RES,CHIP	270	5%	1/10W
R233	1-216-049-91	RES,CHIP	1K	5%	1/10W
R234	1-216-097-91	RES,CHIP	100K	5%	1/10W
R235	1-216-037-00	RES,CHIP	330	5%	1/10W
R236	1-216-097-91	RES,CHIP	100K	5%	1/10W
R237	1-216-097-91	RES,CHIP	100K	5%	1/10W
R239	1-216-073-00	RES,CHIP	10K	5%	1/10W
R240	1-216-129-00	RES,CHIP	2.2M	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R241	1-216-025-91	RES,CHIP	100	5%	1/10W
R243	1-216-043-91	RES,CHIP	560	5%	1/10W
R244	1-216-295-91	SHORT	0		
R267	1-216-121-91	RES,CHIP	1M	5%	1/10W
R301	1-215-395-00	METAL	82	1%	1/4W
R302	1-216-025-91	RES,CHIP	100	5%	1/10W
R303	1-215-395-00	METAL	82	1%	1/4W
R304	1-216-025-91	RES,CHIP	100	5%	1/10W
R305	1-216-017-91	RES,CHIP	47	5%	1/10W
R306	1-216-017-91	RES,CHIP	47	5%	1/10W
R308	1-216-099-00	RES,CHIP	120K	5%	1/10W
R309	1-216-107-00	RES,CHIP	270K	5%	1/10W
R310	1-216-295-91	SHORT	0		
R311	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R312	1-216-623-11	METAL CHIP	68	0.50%	1/10W
R313	1-216-009-00	RES,CHIP	22	5%	1/10W
R314	1-216-035-00	RES,CHIP	270	5%	1/10W
R315	1-216-035-00	RES,CHIP	270	5%	1/10W
R316	1-216-017-91	RES,CHIP	47	5%	1/10W
R317	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R318	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R319	1-216-009-00	RES,CHIP	22	5%	1/10W
R320	1-216-097-91	RES,CHIP	100K	5%	1/10W
R321	1-216-097-91	RES,CHIP	100K	5%	1/10W
R322	1-216-027-00	RES,CHIP	120	5%	1/10W
R323	1-216-027-00	RES,CHIP	120	5%	1/10W
R324	1-219-497-11	CARBON	22	5%	1/2W
R325	1-216-693-11	METAL CHIP	56K	0.50%	1/10W
R326	1-216-097-91	RES,CHIP	100K	5%	1/10W
R327	1-216-035-00	RES,CHIP	270	5%	1/10W
R328	1-216-121-91	RES,CHIP	1M	5%	1/10W
R329	1-218-776-11	METAL CHIP	1M	0.50%	1/10W
R330	1-216-097-91	RES,CHIP	100K	5%	1/10W
R331	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R332	1-216-035-00	RES,CHIP	270	5%	1/10W
R333	1-216-049-91	RES,CHIP	1K	5%	1/10W
R334	1-216-097-91	RES,CHIP	100K	5%	1/10W
R335	1-216-037-00	RES,CHIP	330	5%	1/10W
R336	1-216-097-91	RES,CHIP	100K	5%	1/10W
R337	1-216-097-91	RES,CHIP	100K	5%	1/10W
R339	1-216-073-00	RES,CHIP	10K	5%	1/10W
R340	1-216-129-00	RES,CHIP	2.2M	5%	1/10W
R341	1-216-025-91	RES,CHIP	100	5%	1/10W
R344	1-216-295-91	SHORT	0		
R367	1-216-121-91	RES,CHIP	1M	5%	1/10W
R406	1-216-049-91	RES,CHIP	1K	5%	1/10W
R407	1-216-089-91	RES,CHIP	47K	5%	1/10W
R408	1-216-097-91	RES,CHIP	100K	5%	1/10W
R409	1-216-049-91	RES,CHIP	1K	5%	1/10W
R410	1-216-049-91	RES,CHIP	1K	5%	1/10W
R411	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R412	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R413	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R415	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R416	1-216-049-91	RES,CHIP	1K	5%	1/10W
R417	1-216-089-91	RES,CHIP	47K	5%	1/10W
R418	1-260-127-11	CARBON	220K	5%	1/2W
R419	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R420	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R421	1-216-103-00	RES,CHIP	180K	5%	1/10W
R422	1-216-025-91	RES,CHIP	100	5%	1/10W
R423	1-216-089-91	RES,CHIP	47K	5%	1/10W
R424	1-216-025-91	RES,CHIP	100	5%	1/10W
R425	1-216-017-91	RES,CHIP	47	5%	1/10W
R426	1-216-025-91	RES,CHIP	100	5%	1/10W
R427	1-216-025-91	RES,CHIP	100	5%	1/10W
R428	1-216-049-91	RES,CHIP	1K	5%	1/10W
R429	1-216-025-91	RES,CHIP	100	5%	1/10W
R430	1-216-025-91	RES,CHIP	100	5%	1/10W
R431	1-216-025-91	RES,CHIP	100	5%	1/10W
R432	1-216-025-91	RES,CHIP	100	5%	1/10W
R433	1-216-025-91	RES,CHIP	100	5%	1/10W
R434	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R435	1-216-121-91	RES,CHIP	1M	5%	1/10W
R436	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R438	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R439	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R440	1-216-079-00	RES,CHIP	18K	5%	1/10W
R441	1-216-025-91	RES,CHIP	100	5%	1/10W
R442	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R443	1-216-041-00	RES,CHIP	470	5%	1/10W
R444	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R446	1-216-025-91	RES,CHIP	100	5%	1/10W
R451	1-216-025-91	RES,CHIP	100	5%	1/10W
R452	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R453	1-216-073-00	RES,CHIP	10K	5%	1/10W
R454	1-216-073-00	RES,CHIP	10K	5%	1/10W
R456	1-216-089-91	RES,CHIP	47K	5%	1/10W
R457	1-219-720-11	METAL	10M	5%	1W
R458	1-211-885-21	METAL	2.2M	5%	1W
R459	1-219-720-11	METAL	10M	5%	1W
R461	1-249-441-11	CARBON	100K	5%	1/4W
R462	1-216-089-91	RES,CHIP	47K	5%	1/10W
R463	1-216-099-00	RES,CHIP	120K	5%	1/10W
R464	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R466	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R470	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R471	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R473	1-216-073-00	RES,CHIP	10K	5%	1/10W
R475	1-216-073-00	RES,CHIP	10K	5%	1/10W
R477	1-216-081-00	RES,CHIP	22K	5%	1/10W
R478	1-249-381-11	CARBON	1	5%	1/4W F
R479	1-249-381-11	CARBON	1	5%	1/4W F
R480	1-249-381-11	CARBON	1	5%	1/4W F

<SPARK GAP>

SG101	1-517-499-21	GAP, SPARK	
SG201	1-517-499-21	GAP, SPARK	
SG301	1-517-499-21	GAP, SPARK	

A GA G

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REF.NO.	PART NO.	DESCRIPTION			REMARK
SG401	1-519-526-11	LAMP, NEON			
SG402	1-519-422-11	GAP, SPARK			
		<SOCKET>			
SK401⚠	1-251-640-11	SOCKET, PICTURE TUBE			
**********					
*	8-933-269-00	GA BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C7501	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C7502	1-136-169-00	FILM	0.22MF	5%	50V
C7503	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C7504	1-136-165-00	FILM	0.1MF	5%	50V
C7505	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C7506	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
		<CONNECTOR>			
CN7501*	1-774-512-11	CONNECTOR, BPARD TO BOARD 10P			
		<DIODE>			
D7501	8-719-110-57	DIODE RD22ESB2			
D7502	8-719-911-19	DIODE 1SS119-25			
		<IC>			
IC7501	8-759-482-62	IC MC33262P			
		<TRANSISTOR>			
Q7501	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q7502	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q7503	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q7504	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
		<RESISTOR>			
R7501	1-216-025-91	RES,CHIP	100	5%	1/10W
R7502	1-216-073-00	RES,CHIP	10K	5%	1/10W
R7503	1-216-041-00	RES,CHIP	470	5%	1/10W
R7504	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R7505	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R7506	1-216-073-00	RES,CHIP	10K	5%	1/10W
R7507	1-216-089-91	RES,CHIP	47K	5%	1/10W
R7508	1-216-073-00	RES,CHIP	10K	5%	1/10W
R7509	1-216-073-00	RES,CHIP	10K	5%	1/10W
R7510	1-216-073-00	RES,CHIP	10K	5%	1/10W
R7511	1-216-073-00	RES,CHIP	10K	5%	1/10W
R7512	1-216-089-91	RES,CHIP	47K	5%	1/10W
R7513	1-216-093-00	RES,CHIP	68K	5%	1/10W
**********					
*	8-933-277-00	G BOARD, COMPLETE			
		**********			
	4-382-854-01	SCREW (M3X8), P, SW (+) (IC660)			
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q610, Q640, D610, D611, D672)			
*	7-322-065-72	RUBBER, RTV (SE-9168) (130G) (C671, C682, VDR640)			
		<CAPACITOR>			
C601⚠	1-113-900-51	CERAMIC	470PF	10%	250V
C602⚠	1-113-900-51	CERAMIC	470PF	10%	250V
C603⚠	1-107-533-51	FILM	1MF	20%	250V
C604⚠	1-107-533-51	FILM	1MF	20%	250V
C605⚠	1-113-926-91	CERAMIC	0.0047MF		250V
C606⚠	1-113-926-91	CERAMIC	0.0047MF		250V
C607	1-113-900-11	CERAMIC	470PF	10%	250V
C610	1-137-479-11	FILM	1MF	10%	400V
C611	1-117-849-11	ELECT	330MF	20%	450V
C612	1-126-959-11	ELECT	0.47MF	20%	50V
C616	1-107-888-11	ELECT	47MF	20%	25V
C640	1-165-127-11	CERAMIC	470PF	10%	500V
C641	1-165-127-11	CERAMIC	470PF	10%	500V
C642	1-136-171-00	FILM	0.33MF	5%	50V
C643	1-136-171-00	FILM	0.33MF	5%	50V
C644	1-165-127-11	CERAMIC	470PF	10%	500V
C645	1-136-167-00	FILM	0.15MF	5%	50V
C646	1-136-167-00	FILM	0.15MF	5%	50V
C647	1-129-719-00	FILM	0.027MF	5%	630V
C660	1-111-057-11	ELECT	120MF	20%	25V
C661	1-128-526-11	ELECT	100MF	20%	16V
C662	1-137-399-11	FILM	0.1MF	5%	50V
C663	1-126-965-11	ELECT	22MF	20%	50V
C670	1-137-370-11	FILM	0.01MF	5%	50V
C671	1-107-966-51	ELECT	220MF	20%	250V
C672	1-107-959-11	ELECT	3.3MF	20%	250V
C673	1-107-935-11	ELECT	330MF	20%	100V
C674	1-107-928-11	ELECT	4.7MF	20%	100V
C675	1-107-890-11	ELECT	2200MF	20%	25V
C676	1-107-888-11	ELECT	47MF	20%	25V
C677	1-107-890-11	ELECT	2200MF	20%	25V
C678	1-107-888-11	ELECT	47MF	20%	25V
C679	1-126-927-11	ELECT	2200MF	20%	10V
C680	1-126-927-11	ELECT	2200MF	20%	10V
C681	1-107-905-11	ELECT	4.7MF	20%	50V
C682	1-126-963-11	ELECT	4.7MF	20%	50V
C683	1-164-646-11	CERAMIC	2200PF	10%	500V
C684	1-137-370-11	FILM	0.01MF	5%	50V
C685	1-107-909-11	ELECT	47MF	20%	50V
C690	1-107-888-11	ELECT	47MF	20%	25V

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REF.NO.	PART NO.	DESCRIPTION				REMARK
C691	1-107-888-11	ELECT	47MF	20%	25V	
C692	1-111-016-11	ELECT	0.0012F	20%	10V	
C693	1-137-399-11	FILM	0.1MF	5%	50V	
C695	1-164-644-11	CERAMIC	330PF	10%	500V	
C697	1-136-165-00	FILM	0.1MF	5%	50V	
		<CONNECTOR>				
CN603*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P				
CN604	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P				
CN605	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P				
CN610*	1-774-511-11	CONNECTOR, BOARD TO BOARD 10P				
CN671*	1-564-514-11	PLUG, CONNECTOR 11P				
CN672*	1-564-512-11	PLUG, CONNECTOR 9P				
CN673*	1-564-508-11	PLUG, CONNECTOR 5P				
		<DIODE>				
D610 ⚠	8-719-510-53	DIODE D4SB60L				
D611	8-719-029-04	DIODE D5L60				
D612	8-719-304-63	DIODE RM11C				
D613	8-719-110-49	DIODE RD18ESB2				
D614	8-719-977-28	DIODE DTZ10B				
D617	8-719-404-49	DIODE MA111				
D640	8-719-404-49	DIODE MA111				
D660	8-719-059-23	DIODE P6KE200AG23				
D661	8-719-979-64	DIODE UF4005PKG23				
D662	8-719-058-91	DIODE AG01A-V0				
D663	8-719-110-31	DIODE RD12ESB2				
D666	8-719-105-99	DIODE RD6.2M-B1				
D670	8-719-064-49	DIODE D4SBL40				
D671	8-719-510-64	DIODE S2LA20F				
D672	8-719-052-91	DIODE D4SBS4-F				
D673	8-719-022-97	DIODE D2S4MF				
D674	8-719-022-97	DIODE D2S4MF				
D677	8-719-911-19	DIODE 1SS119-25				
D678	8-719-911-19	DIODE 1SS119-25				
D680	8-719-404-49	DIODE MA111				
D681	8-719-404-49	DIODE MA111				
D682	8-719-510-64	DIODE S2LA20F				
D683	8-719-911-19	DIODE 1SS119-25				
D684	8-719-110-57	DIODE RD22ESB2				
D691	8-719-510-37	DIODE D5LC20U				
D692	8-719-911-19	DIODE 1SS119-25				
D693	8-719-404-49	DIODE MA111				
		<FUSE>				
F601 ⚠	1-576-233-11	FUSE (H.B.C.) (6.3A/250V)				
	1-533-223-11	HOLDER, FUSE ;F601				
		<FERRITE BEAD>				
FB610	1-410-396-41	FERRITE	0.45UH			
FB611	1-410-396-41	FERRITE	0.45UH			
FB612	1-410-396-41	FERRITE	0.45UH			

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<IC>				
IC630	8-749-013-03	IC DM-60				
IC660	8-759-470-64	IC TOP223Y-BB				
IC690	8-749-011-42	IC SI-3050F				
IC691	8-759-140-85	IC UPC1093J				
		<COIL>				
L610	1-416-409-11	INDUCTOR	0UH			
L611	1-411-674-11	INDUCTOR	0UH			
L670	1-412-529-11	INDUCTOR	22UH			
L671	1-412-529-11	INDUCTOR	22UH			
L672	1-412-529-11	INDUCTOR	22UH			
L673	1-412-529-11	INDUCTOR	22UH			
L691	1-412-529-11	INDUCTOR	22UH			
		<PHOTO COUPLER>				
PH660	8-749-010-64	PHOTO COUPLER PC123F2				
PH680	8-749-010-64	PHOTO COUPLER PC123F2				
		<IC LINK>				
PS670 ⚠	1-533-593-31	LINK, IC (2A/90V AV, 60V DC)				
PS671 ⚠	1-533-593-31	LINK, IC (2A/90V AV, 60V DC)				
PS673 ⚠	1-533-593-31	LINK, IC (2A/90V AV, 60V DC)				
PS674 ⚠	1-533-593-31	LINK, IC (2A/90V AV, 60V DC)				
		<TRANSISTOR>				
Q610	8-729-041-65	TRANSISTOR 2SK2195F04				
Q615	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R				
Q640	8-729-041-12	TRANSISTOR MX0841AB-F				
Q641	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q642	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q660	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q680	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q681	8-729-230-45	TRANSISTOR 2SC2458-YGR				
Q682	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q683	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q690	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q691	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R				
		<RESISTOR>				
R601 ⚠	1-220-825-91	CARBON	330K	5%	1/2W	
R604	1-260-089-11	CARBON	150	5%	1/2W	
R610	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R611	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R612	1-215-477-00	METAL	220K	1%	1/4W	
R613	1-215-477-00	METAL	220K	1%	1/4W	
R614	1-215-473-00	METAL	150K	1%	1/4W	
R615	1-215-473-00	METAL	150K	1%	1/4W	
R616	1-215-473-00	METAL	150K	1%	1/4W	
R617	1-215-481-00	METAL	330K	1%	1/4W	
R618	1-215-477-00	METAL	220K	1%	1/4W	

G D

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R619	1-215-485-00	METAL	470K	1%	1/4W
R620	1-215-485-00	METAL	470K	1%	1/4W
R621	1-215-481-00	METAL	330K	1%	1/4W
R622	1-216-049-91	RES,CHIP	1K	5%	1/10W
R623	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R624	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R625	1-249-389-11	CARBON	4.7	5%	1/4W
R626	1-249-429-11	CARBON	10K	5%	1/4W
R627	1-215-479-00	METAL	270K	1%	1/4W
R628	1-215-481-00	METAL	330K	1%	1/4W
R629	1-215-461-00	METAL	47K	1%	1/4W
R631	1-247-807-31	CARBON	100	5%	1/4W
R632	1-216-073-00	RES,CHIP	10K	5%	1/10W
R633	1-215-481-00	METAL	330K	1%	1/4W
R635	1-216-073-00	RES,CHIP	10K	5%	1/10W
R640	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R641	1-218-642-11	METAL OXIDE	100K	5%	1W F
R642	1-218-642-11	METAL OXIDE	100K	5%	1W F
R643	1-247-863-91	CARBON	22K	5%	1/4W
R644	1-216-105-91	RES,CHIP	220K	5%	1/10W
R645	1-216-081-00	RES,CHIP	22K	5%	1/10W
R646	1-216-073-00	RES,CHIP	10K	5%	1/10W
R647	1-249-441-11	CARBON	100K	5%	1/4W
R648	1-216-353-00	METAL OXIDE	2.2	5%	1W F
R649	1-218-642-11	METAL OXIDE	100K	5%	1W F
R650	1-218-642-11	METAL OXIDE	100K	5%	1W F
R651	1-216-353-00	METAL OXIDE	2.2	5%	1W F
R652	1-212-942-00	FUSIBLE	2.2	5%	1/2W F
R655	1-216-073-00	RES,CHIP	10K	5%	1/10W
R661	1-249-387-11	CARBON	3.3	5%	1/4W F
R662	1-216-073-00	RES,CHIP	10K	5%	1/10W
R663	1-216-073-00	RES,CHIP	10K	5%	1/10W
R664	1-247-791-91	CARBON	22	5%	1/4W
R665	1-216-033-00	RES,CHIP	220	5%	1/10W
R666	1-215-441-00	METAL	6.8K	1%	1/4W
R667	1-215-433-00	METAL	3.3K	1%	1/4W
R668	1-249-401-11	CARBON	47	5%	1/4W
R669	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R671	1-216-113-00	RES,CHIP	470K	5%	1/10W
R672	1-216-049-91	RES,CHIP	1K	5%	1/10W
R673	1-249-413-11	CARBON	470	5%	1/4W F
R674	1-249-377-11	CARBON	0.47	5%	1/4W F
R675	1-260-292-11	CARBON	1	5%	1/2W
R676	1-249-413-11	CARBON	470	5%	1/4W
R680	1-216-073-00	RES,CHIP	10K	5%	1/10W
R681	1-216-049-91	RES,CHIP	1K	5%	1/10W
R682	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R683	1-216-025-91	RES,CHIP	100	5%	1/10W
R685	1-216-073-00	RES,CHIP	10K	5%	1/10W
R686	1-216-049-91	RES,CHIP	1K	5%	1/10W
R687	1-216-049-91	RES,CHIP	1K	5%	1/10W
R688	1-216-073-00	RES,CHIP	10K	5%	1/10W
R689	1-216-073-00	RES,CHIP	10K	5%	1/10W
R691	1-216-073-00	RES,CHIP	10K	5%	1/10W
R692	1-260-085-11	CARBON	68	5%	1/2W
R693	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R694	1-216-073-00	RES,CHIP	10K	5%	1/10W
R695	1-249-443-11	CARBON	0.47	5%	1/4W F
R696	1-216-633-11	METAL CHIP	180	0.50%	1/10W
R697	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R698	1-216-073-00	RES,CHIP	10K	5%	1/10W
R699	1-216-081-00	RES,CHIP	22K	5%	1/10W

<RELAY>

RY601	⚠1-515-669-21	RELAY	
RY602	⚠1-755-031-11	RELAY	

<TRANSFORMER>

T601	⚠1-429-180-11	TRANSFORMER, LINE FILTER	
T640	1-431-538-11	TRANSFORMER, CONVERTER (PIT)	
T641	1-429-992-11	TRANSFORMER, CONVERTER (PRT)	
T660	1-431-565-11	TRANSFORMER, CONVERTER (SRT)	

<THERMISTOR>

TH601	⚠1-809-260-11	THERMISTOR, POWER	
THP601	⚠1-809-827-11	THERMISTOR, POSITIVE	

<VARISTOR>

VDR601	⚠1-801-268-51	VARISTOR TNR14V471K660	
VDR602	⚠1-810-622-21	VARISTOR	
VDR640	1-810-974-21	VARISTOR TNR10V431K660	

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*	8-933-307-00	D BOARD, COMPLETE
		**********
	4-040-989-01	SPRING (A), TR RETAINER (IC702, R511)
	4-040-992-01	SPRING (AA), TR RETAINER (IC502, Q507)
	4-040-994-01	SPRING (BB), TR RETAINER (Q508, D519)
	4-047-285-01	SHEET, INSULATING (Q909)
	4-060-719-02	SHEET, INSULATE (IC502)
	4-060-720-01	SHEET, INSULATE (Q508)
	4-060-844-01	SHEET, INSULATING (IC702)
	4-382-854-01	SCREW (M3X8), P, SW (+) (R937)
	4-382-854-11	SCREW (M3X10), P, SW (+) (IC702, Q704, Q706, Q908, Q909, R937)
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3 (IC502, Q507, Q508, D519, R511)

<CAPACITOR>

C001	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C002	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C003	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C004	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C005	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C006	1-126-960-11	ELECT	1MF	20%	50V
C007	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C008	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C009	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C010	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C011	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C012	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C013	1-126-967-11	ELECT	47MF	20%	50V
C014	1-107-914-11	ELECT	1000MF	20%	25V
C015	1-107-914-11	ELECT	1000MF	20%	25V
C016	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C017	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C018	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C019	1-126-967-11	ELECT	47MF	20%	50V
C020	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C021	1-163-023-00	CERAMIC CHIP	0.015MF	10%	50V
C022	1-126-933-11	ELECT	100MF	20%	16V
C023	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C024	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C025	1-126-960-11	ELECT	1MF	20%	50V
C026	1-137-372-11	FILM	0.022MF	5%	50V
C027	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C028	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C029	1-126-960-11	ELECT	1MF	20%	50V
C030	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C031	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C032	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C034	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C035	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
C036	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C037	1-126-934-11	ELECT	220MF	20%	16V
C038	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C039	1-126-964-11	ELECT	10MF	20%	50V
C040	1-126-963-11	ELECT	4.7MF	20%	50V
C041	1-126-960-11	ELECT	1MF	20%	50V
C042	1-126-967-11	ELECT	47MF	20%	50V
C043	1-126-967-11	ELECT	47MF	20%	50V
C044	1-126-967-11	ELECT	47MF	20%	50V
C045	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C046	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C047	1-126-934-11	ELECT	220MF	20%	16V
C048	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C049	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C050	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C051	1-126-960-11	ELECT	1MF	20%	50V
C052	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C054	1-126-963-11	ELECT	4.7MF	20%	50V
C055	1-126-963-11	ELECT	4.7MF	20%	50V
C056	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C057	1-107-909-11	ELECT	47MF	20%	50V
C058	1-126-934-11	ELECT	220MF	20%	16V
C059	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C060	1-126-964-11	ELECT	10MF	20%	50V
C061	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C063	1-137-399-11	FILM	0.1MF	5%	50V
C065	1-126-965-11	ELECT	22MF	20%	50V
C066	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C067	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C068	1-126-964-11	ELECT	10MF	20%	50V
C069	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C070	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C072	1-126-960-11	ELECT	1MF	20%	50V
C073	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V
C074	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C075	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C076	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C077	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C078	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C079	1-126-967-11	ELECT	47MF	20%	50V
C080	1-126-967-11	ELECT	47MF	20%	50V
C081	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C082	1-126-964-11	ELECT	10MF	20%	50V
C083	1-137-399-11	FILM	0.1MF	5%	50V
C084	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C085	1-137-399-11	FILM	0.1MF	5%	50V
C086	1-126-964-11	ELECT	10MF	20%	50V
C087	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C090	1-109-982-11	CERAMIC CHIP	1MF	10%	10V
C092	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C093	1-126-964-11	ELECT	10MF	20%	50V
C094	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C095	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C096	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C097	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C098	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C099	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C501	1-107-909-11	ELECT	47MF	20%	50V
C502	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C503	1-136-169-00	FILM	0.22MF	5%	50V
C504	1-137-605-11	FILM	0.01MF	10%	250V
C505	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C506	1-136-169-00	FILM	0.22MF	5%	50V
C507	1-136-173-00	FILM	0.47MF	5%	50V
C508	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C509	1-126-941-11	ELECT	470MF	20%	25V
C510	1-137-368-11	FILM	0.0047MF	5%	50V
C511	1-117-398-11	ELECT	33MF	20%	250V
C512	1-107-889-11	ELECT	220MF	20%	25V
C513	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C514	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C515	1-107-889-11	ELECT	220MF	20%	25V
C516	1-137-399-11	FILM	0.1MF	5%	50V
C517	1-104-574-11	CERAMIC	0.0047MF	10%	2KV
C518	1-117-959-11	FILM	4700PF	3%	1.8KV
C519	1-107-444-11	CERAMIC	100PF	5%	2KV
C520	1-136-553-11	FILM	0.0015MF	5%	630V
C521	1-107-597-11	CERAMIC	22PF	5%	500V
C522	1-107-444-11	CERAMIC	100PF	5%	2KV
C523	1-137-370-11	FILM	0.01MF	5%	50V
C524	1-113-694-11	FILM	0.056MF	5%	250V
C525	1-107-846-11	FILM	0.1MF	5%	250V
C526	1-115-514-11	FILM	0.22MF	5%	250V

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C527	1-115-517-11	FILM	0.39MF	5%	250V
C528	1-115-521-11	FILM	0.82MF	5%	250V
C529	1-107-683-11	ELECT	2.2MF	0	250V
C530	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C531	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C532	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C533	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C534	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C535	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C536	1-128-526-11	ELECT	100MF	20%	25V
C537	1-115-523-21	FILM	1.2MF	5%	250V
C538	1-117-958-11	FILM	0.24MF	5%	400V
C539	1-107-960-11	ELECT	4.7MF	20%	250V
C540	1-106-343-00	MYLAR	0.001MF	10%	200V
C541	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C542	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C544	1-137-368-11	FILM	0.0047MF	5%	50V
C545	1-126-967-11	ELECT	47MF	20%	50V
C547	1-126-967-11	ELECT	47MF	20%	50V
C549	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C550	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C551	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C553	1-126-963-11	ELECT	4.7MF	20%	50V
C554	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C555	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C556	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C557	1-115-185-11	CERAMIC CHIP	0.033MF	10%	50V
C559	1-162-134-11	CERAMIC	470PF	10%	2KV
C561	1-136-173-00	FILM	0.47MF	5%	50V
C562	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C563	1-117-214-11	CERAMIC	0.001MF	10%	2KV
C564	1-126-963-11	ELECT	4.7MF	20%	50V
C666	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C667	1-126-967-11	ELECT	47MF	20%	50V
C701	1-126-967-11	ELECT	47MF	20%	50V
C702	1-137-399-11	FILM	0.1MF	5%	50V
C705	1-126-942-61	ELECT	1000MF	20%	25V
C706	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C707	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C709	1-137-399-11	FILM	0.1MF	5%	50V
C710	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C711	1-107-894-11	ELECT	220MF	20%	35V
C712	1-106-228-00	MYLAR	0.22MF	10%	100V
C713	1-126-942-61	ELECT	1000MF	20%	25V
C714	1-126-967-11	ELECT	47MF	20%	50V
C715	1-107-932-11	ELECT	47MF	20%	100V
C717	1-107-930-91	ELECT	22MF	20%	100V
C729	1-162-134-11	CERAMIC	470PF	10%	2KV
C735	1-137-399-11	FILM	0.1MF	5%	50V
C746	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C747	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C750	1-126-964-11	ELECT	10MF	20%	50V
C751	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C901	1-107-889-11	ELECT	220MF	20%	25V
C902	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C903	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C904	1-137-605-11	FILM	0.01MF	10%	250V
C905	1-104-653-11	ELECT	220MF	20%	16V
C906	1-106-220-00	MYLAR	0.1MF	10%	100V
C907	1-119-748-11	ELECT	33MF	20%	400V
C908	1-136-169-00	FILM	0.22MF	5%	50V
C909	1-106-355-12	MYLAR	0.0033MF	10%	200V
C910	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C911	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C912	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C913	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C914	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C915	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C916	1-136-064-00	FILM	2200PF	3%	1.2KV
C917	1-107-889-11	ELECT	220MF	20%	25V
C919	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C920	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C921	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C922	1-117-665-11	FILM	0.33MF	5%	200V
C923	1-106-359-00	MYLAR	0.0047MF	10%	100V
C924	1-106-220-00	MYLAR	0.1MF	10%	100V
C925	1-137-372-11	FILM	0.022MF	5%	50V
C926	1-106-228-00	MYLAR	0.22MF	10%	100V
C927	1-107-903-11	ELECT	2.2MF	20%	50V
C928	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C929	1-128-526-11	ELECT	100MF	20%	25V
C930	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C931	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C945	1-107-909-11	ELECT	47MF	20%	50V
C1003	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1004	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1005	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1006	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1007	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1008	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1009	1-126-960-11	ELECT	1MF	20%	50V
C1501	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1502	1-117-722-11	ELECT	2200MF	20%	10V
C1503	1-163-001-11	CERAMIC CHIP	220PF	10%	50V

<CONNECTOR>

CN501*	1-564-512-11	PLUG, CONNECTOR 9P
CN502*	1-564-514-11	PLUG, CONNECTOR 11P
CN503*	1-564-510-11	PLUG, CONNECTOR 7P
CN504*	1-564-508-11	PLUG, CONNECTOR 5P
CN505*	1-508-879-11	BASE POST
CN506*	1-564-511-11	PLUG, CONNECTOR 8P
CN507	1-764-101-11	PIN, CONNECTOR (PC BOARD) 2P
CN508*	1-778-955-11	PIN, CONNECTOR (PC BOARD) 10P
CN509	1-564-505-11	PLUG, CONNECTOR 2P
CN511*	1-564-514-11	PLUG, CONNECTOR 11P
CN512*	1-564-512-11	PLUG, CONNECTOR 9P
CN520*	1-564-509-11	PLUG, CONNECTOR 6P
CN901*	1-564-520-11	PLUG, CONNECTOR 5P

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>	
D004	8-719-800-76	DIODE 1SS226	
D007	8-719-976-99	ZENER DIODE DTZ5.1B	
D008	8-719-976-99	ZENER DIODE DTZ5.1B	
D009	8-719-976-99	ZENER DIODE DTZ5.1B	
D010	8-719-976-99	ZENER DIODE DTZ5.1B	
D012	8-719-800-76	DIODE 1SS226	
D013	8-719-800-76	DIODE 1SS226	
D014	8-719-800-76	DIODE 1SS226	
D015	8-719-800-76	DIODE 1SS226	
D016	8-719-800-76	DIODE 1SS226	
D019	8-719-800-76	DIODE 1SS226	
D020	8-719-800-76	DIODE 1SS226	
D025	8-719-976-99	ZENER DIODE DTZ5.1B	
D026	8-719-800-76	DIODE 1SS226	
D027	8-719-800-76	DIODE 1SS226	
D028	8-719-800-76	DIODE 1SS226	
D029	8-719-800-76	DIODE 1SS226	
D032	8-719-976-99	ZENER DIODE DTZ5.1B	
D033	8-719-976-99	ZENER DIODE DTZ5.1B	
D034	8-719-801-78	DIODE 1SS184	
D035	8-719-801-78	DIODE 1SS184	
D050	8-719-404-49	DIODE MA111	
D501	8-719-977-40	ZENER DIODE DTZ13B	
D502	8-719-063-89	DIODE YG911S3R	
D503	8-719-404-49	DIODE MA111	
D504	8-719-984-73	DIODE SB560	
D505	8-719-018-82	DIODE RGP02-20EL-6394	
D506	8-719-911-19	DIODE 1SS119-25	
D507	8-719-911-19	DIODE 1SS119-25	
D508	8-719-109-85	ZENER DIODE RD5.1ESB2	
D509	8-719-911-19	DIODE 1SS119-25	
D510	8-719-951-30	DIODE ERA91-02	
D511	8-719-911-19	DIODE 1SS119-25	
D512	8-719-018-82	DIODE RGP02-20EL-6394	
D513	8-719-404-49	DIODE MA111	
D514	8-719-109-93	ZENER DIODE RD6.2ESB2	
D516	8-719-105-99	ZENER DIODE RD6.2M-B1	
D517	8-719-105-99	ZENER DIODE RD6.2M-B1	
D518	8-719-404-49	DIODE MA111	
D519	8-719-066-36	DIODE FMQ-G5GS	
D521	8-719-404-49	DIODE MA111	
D530	8-719-018-82	DIODE RGP02-20EL-6394	
D531	8-719-018-82	DIODE RGP02-20EL-6394	
D660	8-719-977-69	ZENER DIODE DTZ24B	
D701	8-719-158-15	ZENER DIODE RD5.6SB	
D704	8-719-404-49	DIODE MA111	
D705	8-719-404-49	DIODE MA111	
D706	8-719-976-99	ZENER DIODE DTZ5.1B	
D709	8-719-979-85	DIODE EGP20G	
D713	8-719-911-19	DIODE 1SS119-25	
D714	8-719-911-19	DIODE 1SS119-25	
D715	8-719-911-19	DIODE 1SS119-25	
D718	8-719-976-99	ZENER DIODE DTZ5.1B	
D720	8-719-028-72	DIODE RGP02-17EL-6433	
D721	8-719-028-72	DIODE RGP02-17EL-6433	
D901	8-719-404-49	DIODE MA111	
D902	8-719-404-49	DIODE MA111	
D903	8-719-911-19	DIODE 1SS119-25	
D904	8-719-404-49	DIODE MA111	
D905	8-719-404-49	DIODE MA111	
D906	8-719-404-49	DIODE MA111	
D907	8-719-158-49	ZENER DIODE RD12SB2	
D908	8-719-158-49	ZENER DIODE RD12SB2	
D909	8-719-977-40	ZENER DIODE DTZ13B	
D910	8-719-063-89	DIODE YG911S3R	
D911	8-719-978-69	ZENER DIODE DTZ-TT11-16B	
D913	8-719-158-49	ZENER DIODE RD12SB2	
D915	8-719-109-85	ZENER DIODE RD5.1ESB2	
D916	8-719-939-79	DIODE GMA01-BT	
D917	8-719-110-46	ZENER DIODE RD16ESB3	
D919	8-719-911-19	DIODE 1SS119-25	
D921	8-719-404-49	DIODE MA111	
D922	8-719-404-49	DIODE MA111	
D923	8-719-404-49	DIODE MA111	
D924	8-719-976-99	ZENER DIODE DTZ5.1B	
D935	8-719-977-81	ZENER DIODE DTZ33B	
D1501	8-719-976-99	ZENER DIODE DTZ5.1B	
D1502	8-719-404-49	DIODE MA111	
D1503	8-719-404-49	DIODE MA111	
		<FERRITE BEAD>	
FB501	1-410-397-21	FERRITE 1.1UH	
FB502	1-410-397-21	FERRITE 1.1UH	
FB901	1-410-397-21	FERRITE 1.1UH	
FB1025	1-414-232-11	INDUCTOR CHIP 0UH	
FB1026	1-414-232-11	INDUCTOR CHIP 0UH	
		<IC>	
IC001	8-759-531-24	IC MB90553PF-G-120-BND	
IC002	8-759-442-20	IC 24LC21A/SN	
IC003	8-759-168-20	IC TA78L09S	
IC004	8-759-454-79	IC 24LC16BT/SN	
IC005	8-759-162-80	IC MM1170BFB	
IC006	8-759-231-53	IC TA7805S	
IC007	8-752-078-46	IC CXA2043Q	
IC008	8-759-701-59	IC NJM78M09FA	
IC009	8-759-082-57	IC TC7W04FU	
IC010	8-752-083-83	IC CXA2044M-T6	
IC011	8-759-708-05	IC NJM78L05A	
IC012	8-759-442-20	IC 24LC21A/SN	
IC013	8-759-233-66	IC TC74HCT04AF	
IC502	8-759-803-42	IC LA6500-FA	
IC505	8-759-100-96	IC UPC4558G2	
IC701	8-759-822-38	IC LA6510	
IC702	8-759-444-82	IC LA7841L	
IC703	8-759-100-96	IC UPC4558G2	
IC901	8-759-467-70	IC BA9756FS-E2	

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Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<CHIP CONDUCTOR>	
JR001	1-216-295-91	SHORT 0	
JR002	1-216-295-91	SHORT 0	
JR003	1-216-295-91	SHORT 0	
JR004	1-216-295-91	SHORT 0	
		<COIL>	
L001	1-406-665-11	INDUCTOR 0UH	
L002	1-406-665-11	INDUCTOR 0UH	
L003	1-412-537-31	INDUCTOR 100UH	
L004	1-412-537-31	INDUCTOR 100UH	
L006	1-410-482-31	INDUCTOR 100UH	
L007	1-412-537-31	INDUCTOR 100UH	
L008	1-412-537-31	INDUCTOR 100UH	
L501	1-412-537-31	INDUCTOR 100UH	
L502	1-406-671-11	INDUCTOR 0UH	
L503	1-416-455-11	COIL, HORIZONTAL LINEARITY	
L504	1-416-456-11	COIL, HORIZONTAL LINEARITY	
L505	1-406-675-11	INDUCTOR 0UH	
L507	1-406-675-11	INDUCTOR 0UH	
L701	1-412-537-31	INDUCTOR 100UH	
L702	1-412-522-31	INDUCTOR 5.6UH	
L901	1-412-537-31	INDUCTOR 100UH	
L902	1-406-660-41	INDUCTOR 0UH	
L903	1-412-537-31	INDUCTOR 100UH	
		<IC LINK>	
PS501⚠	1-533-592-31	LINK, IC (1.6A/90V AC, 60V DC)	
PS502⚠	1-532-984-91	LINK, IC (2A/90V)	
PS503⚠	1-532-984-91	LINK, IC (2A/90V)	
PS504⚠	1-532-984-91	LINK, IC (2A/90V)	
PS701⚠	1-533-590-31	LINK, IC (1A/90V AC, 60V DC)	
PS901⚠	1-533-592-31	LINK, IC (1.6A/90V AC, 60V DC)	
		<TRANSISTOR>	
Q001	8-729-027-31	TRANSISTOR DTA124EKA-T146	
Q003	8-729-216-22	TRANSISTOR 2SA1162-G	
Q004	8-729-216-22	TRANSISTOR 2SA1162-G	
Q005	8-729-216-22	TRANSISTOR 2SA1162-G	
Q006	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q007	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q501	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q503	8-729-901-97	TRANSISTOR 2SA1036K-Q	
Q504	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q505	8-729-901-97	TRANSISTOR 2SA1036K-Q	
Q506	8-729-820-73	TRANSISTOR 2SC3746	
Q507	8-729-035-54	TRANSISTOR 2SJ449	
Q508	8-729-031-87	TRANSISTOR 2SC5047-CA	
Q509	8-729-033-25	TRANSISTOR DTC114GKA	
Q510	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q511	8-729-140-50	TRANSISTOR 2SC3209LK	
Q512	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q517	8-729-216-22	TRANSISTOR 2SA1162-G	
Q522	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
Q523	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
Q524	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
Q525	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
Q526	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
Q527	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
Q528	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
Q660	8-729-033-26	TRANSISTOR DTA114GKAT146	
Q661	8-729-033-25	TRANSISTOR DTC114GKA	
Q701	8-729-800-32	TRANSISTOR 2SC2362K-G	
Q703	8-729-178-43	TRANSISTOR 2SC2784-E	
Q704	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q705	8-729-204-91	TRANSISTOR 2SA1049-GR	
Q706	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q707	8-729-216-22	TRANSISTOR 2SA1162-G	
Q708	8-729-020-07	TRANSISTOR 2SC4686A(LBSONY)	
Q901	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q902	8-729-216-22	TRANSISTOR 2SA1162-G	
Q904	8-729-901-87	TRANSISTOR 2SC2411K-CQ	
Q905	8-729-901-97	TRANSISTOR 2SA1036K-Q	
Q908	8-729-035-54	TRANSISTOR 2SJ449	
Q909	8-729-033-91	TRANSISTOR 2SK1120LBSONY2	
Q911	8-729-033-25	TRANSISTOR DTC114GKA	
		<RESISTOR>	
R001	1-216-025-91	RES,CHIP 100 5% 1/10W	
R002	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R003	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R004	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R005	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R006	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R007	1-216-025-91	RES,CHIP 100 5% 1/10W	
R008	1-216-089-91	RES,CHIP 47K 5% 1/10W	
R009	1-216-025-91	RES,CHIP 100 5% 1/10W	
R010	1-216-081-00	RES,CHIP 22K 5% 1/10W	
R011	1-216-097-91	RES,CHIP 100K 5% 1/10W	
R012	1-216-025-91	RES,CHIP 100 5% 1/10W	
R013	1-216-675-11	METAL CHIP 10K 0.50% 1/10W	
R017	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R018	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R020	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R023	1-216-025-91	RES,CHIP 100 5% 1/10W	
R024	1-216-089-91	RES,CHIP 47K 5% 1/10W	
R025	1-216-295-91	SHORT 0	
R026	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R027	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R028	1-216-065-00	RES,CHIP 4.7K 5% 1/10W	
R029	1-216-089-91	RES,CHIP 47K 5% 1/10W	
R030	1-216-017-91	RES,CHIP 47 5% 1/10W	
R031	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R032	1-216-675-11	METAL CHIP 10K 0.50% 1/10W	
R033	1-216-017-91	RES,CHIP 47 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION			REMARK
R034	1-216-025-91	RES,CHIP	100	5%	1/10W
R035	1-216-049-91	RES,CHIP	1K	5%	1/10W
R036	1-216-025-91	RES,CHIP	100	5%	1/10W
R037	1-216-686-11	METAL CHIP	30K	0.50%	1/10W
R038	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R039	1-216-049-91	RES,CHIP	1K	5%	1/10W
R040	1-216-049-91	RES,CHIP	1K	5%	1/10W
R041	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R042	1-216-089-91	RES,CHIP	47K	5%	1/10W
R043	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R044	1-216-095-00	RES,CHIP	82K	5%	1/10W
R045	1-216-073-00	RES,CHIP	10K	5%	1/10W
R046	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R047	1-216-073-00	RES,CHIP	10K	5%	1/10W
R048	1-216-049-91	RES,CHIP	1K	5%	1/10W
R049	1-216-049-91	RES,CHIP	1K	5%	1/10W
R050	1-216-025-91	RES,CHIP	100	5%	1/10W
R051	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R052	1-216-073-00	RES,CHIP	10K	5%	1/10W
R053	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R054	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R055	1-216-089-91	RES,CHIP	47K	5%	1/10W
R056	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R057	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R058	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R059	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R060	1-216-025-91	RES,CHIP	100	5%	1/10W
R061	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R063	1-216-025-91	RES,CHIP	100	5%	1/10W
R064	1-216-025-91	RES,CHIP	100	5%	1/10W
R065	1-216-025-91	RES,CHIP	100	5%	1/10W
R066	1-216-025-91	RES,CHIP	100	5%	1/10W
R067	1-216-025-91	RES,CHIP	100	5%	1/10W
R068	1-216-025-91	RES,CHIP	100	5%	1/10W
R069	1-216-017-91	RES,CHIP	47	5%	1/10W
R070	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R071	1-216-049-91	RES,CHIP	1K	5%	1/10W
R072	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R073	1-216-295-91	SHORT	0		
R074	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R075	1-216-049-91	RES,CHIP	1K	5%	1/10W
R076	1-216-049-91	RES,CHIP	1K	5%	1/10W
R077	1-216-049-91	RES,CHIP	1K	5%	1/10W
R078	1-216-049-91	RES,CHIP	1K	5%	1/10W
R079	1-216-017-91	RES,CHIP	47	5%	1/10W
R080	1-216-017-91	RES,CHIP	47	5%	1/10W
R081	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R082	1-216-049-91	RES,CHIP	1K	5%	1/10W
R083	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R084	1-216-025-91	RES,CHIP	100	5%	1/10W
R085	1-216-025-91	RES,CHIP	100	5%	1/10W
R086	1-216-049-91	RES,CHIP	1K	5%	1/10W
R088	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R089	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R090	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R092	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R094	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R096	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R097	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R101	1-216-049-91	RES,CHIP	1K	5%	1/10W
R501	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R502	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R503	1-216-041-00	RES,CHIP	470	5%	1/10W
R504	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R505	1-216-041-00	RES,CHIP	470	5%	1/10W
R506	1-249-397-11	CARBON	22	5%	1/4W F
R507	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R508	1-216-025-91	RES,CHIP	100	5%	1/10W
R509	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R510	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R511	1-219-726-11	METAL	2.2	5%	10W
R512	1-216-627-11	METAL CHIP	100	0.50%	1/10W
R513	1-215-860-11	METAL OXIDE	33	5%	1W F
R514	1-211-796-11	FUSIBLE	1	5%	1/2W F
R515	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R516	1-247-815-91	CARBON	220	5%	1/4W
R517	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R518	1-216-097-91	RES,CHIP	100K	5%	1/10W
R519	1-216-393-00	METAL OXIDE	2.2	5%	3W F
R520	1-216-393-00	METAL OXIDE	2.2	5%	3W F
R521	1-249-413-11	CARBON	470	5%	1/4W F
R522	1-216-423-11	METAL OXIDE	27	5%	1W F
R523	1-249-421-11	CARBON	2.2K	5%	1/4W F
R524	1-215-869-11	METAL OXIDE	1K	5%	1W F
R525	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R526	1-214-840-00	METAL	100	1%	1/2W
R527	1-214-840-00	METAL	100	1%	1/2W
R528	1-214-840-00	METAL	100	1%	1/2W
R529	1-260-313-51	CARBON	56	5%	1/2W
R530	1-249-437-11	CARBON	47K	5%	1/4W
R531	1-249-437-11	CARBON	47K	5%	1/4W
R532	1-249-437-11	CARBON	47K	5%	1/4W
R533	1-249-437-11	CARBON	47K	5%	1/4W
R534	1-249-437-11	CARBON	47K	5%	1/4W
R535	1-216-049-91	RES,CHIP	1K	5%	1/10W
R536	1-216-049-91	RES,CHIP	1K	5%	1/10W
R537	1-216-049-91	RES,CHIP	1K	5%	1/10W
R538	1-216-049-91	RES,CHIP	1K	5%	1/10W
R539	1-216-049-91	RES,CHIP	1K	5%	1/10W
R540	1-216-073-00	RES,CHIP	10K	5%	1/10W
R541	1-260-314-11	CARBON	68	5%	1/2W
R542	1-215-863-11	METAL OXIDE	100	5%	1W F
R543	1-216-640-11	METAL CHIP	360	0.50%	1/10W
R544	1-260-085-11	CARBON	68	5%	1/2W
R545	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R546	1-260-288-11	CARBON	0.47	5%	1/2W
R547	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R548	1-215-443-00	METAL	8.2K	1%	1/4W
R549	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R550	1-260-288-11	CARBON	0.47	5%	1/2W
R551	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R552	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R553	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W
R554	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R555	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R556	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W
R557	1-218-760-11	METAL CHIP	220K	0.50%	1/10W
R558	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R561	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R562	1-249-401-11	CARBON	47	5%	1/4W F
R563	1-216-662-11	METAL CHIP	3K	0.50%	1/10W
R564	1-216-697-91	METAL CHIP	82K	0.50%	1/10W
R565	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R566	1-260-311-11	CARBON	39	5%	1/2W
R567	1-216-627-11	METAL CHIP	100	0.50%	1/10W
R568	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W
R571	1-216-381-11	METAL OXIDE	0.22	5%	3W F
R572	1-216-097-91	RES,CHIP	100K	5%	1/10W
R573	1-216-097-91	RES,CHIP	100K	5%	1/10W
R574	1-216-097-91	RES,CHIP	100K	5%	1/10W
R575	1-216-097-91	RES,CHIP	100K	5%	1/10W
R576	1-216-097-91	RES,CHIP	100K	5%	1/10W
R577	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R578	1-216-025-91	RES,CHIP	100	5%	1/10W
R579	1-216-672-11	METAL CHIP	7.5K	0.50%	1/10W
R580	1-216-073-00	RES,CHIP	10K	5%	1/10W
R581	1-216-073-00	RES,CHIP	10K	5%	1/10W
R582	1-216-073-00	RES,CHIP	10K	5%	1/10W
R583	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R584	1-216-081-00	RES,CHIP	22K	5%	1/10W
R585	1-216-081-00	RES,CHIP	22K	5%	1/10W
R586	1-216-049-91	RES,CHIP	1K	5%	1/10W
R587	1-216-049-91	RES,CHIP	1K	5%	1/10W
R588	1-216-097-91	RES,CHIP	100K	5%	1/10W
R589	1-216-097-91	RES,CHIP	100K	5%	1/10W
R590	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R591	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R594	1-249-437-11	CARBON	47K	5%	1/4W
R595	1-249-437-11	CARBON	47K	5%	1/4W
R596	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R663	1-215-482-00	METAL	360K	1%	1/4W
R664	1-215-459-00	METAL	39K	1%	1/4W
R665	1-216-049-91	RES,CHIP	1K	5%	1/10W
R667	1-216-041-00	RES,CHIP	470	5%	1/10W
R669	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R701	1-249-383-11	CARBON	1.5	5%	1/4W F
R702	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R703	1-216-085-00	RES,CHIP	33K	5%	1/10W
R704	1-249-383-11	CARBON	1.5	5%	1/4W F
R705	1-249-385-11	CARBON	2.2	5%	1/4W
R706	1-216-093-00	RES,CHIP	68K	5%	1/10W
R707	1-249-421-11	CARBON	2.2K	5%	1/4W
R708	1-216-073-00	RES,CHIP	10K	5%	1/10W
R709	1-216-473-11	METAL OXIDE	56	5%	3W F
R710	1-216-073-00	RES,CHIP	10K	5%	1/10W
R715	1-216-077-00	RES,CHIP	15K	5%	1/10W
R719	1-249-383-11	CARBON	1.5	5%	1/4W F
R720	1-260-292-11	CARBON	1	5%	1/2W
R721	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R722	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R723	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R724	1-214-798-21	METAL	1.8	1%	1/2W
R725	1-214-798-21	METAL	1.8	1%	1/2W
R726	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R727	1-260-292-11	CARBON	1	5%	1/2W
R728	1-249-381-11	CARBON	1	5%	1/4W F
R729	1-215-865-11	METAL OXIDE	220	5%	1W F
R730	1-219-746-11	CARBON	1K	5%	1/2W
R731	1-216-073-00	RES,CHIP	10K	5%	1/10W
R732	1-216-073-00	RES,CHIP	10K	5%	1/10W
R733	1-219-746-11	CARBON	1K	5%	1/2W
R734	1-215-881-11	METAL OXIDE	15	5%	2W F
R737	1-249-377-11	CARBON	0.47	5%	1/4W F
R738	1-249-377-11	CARBON	0.47	5%	1/4W F
R739	1-249-413-11	CARBON	470	5%	1/4W F
R741	1-249-430-11	CARBON	12K	5%	1/4W
R742	1-249-419-11	CARBON	1.5K	5%	1/4W
R743	1-216-049-91	RES,CHIP	1K	5%	1/10W
R748	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R749	1-216-049-91	RES,CHIP	1K	5%	1/10W
R750	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R751	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R752	1-216-083-00	RES,CHIP	27K	5%	1/10W
R753	1-219-720-11	METAL	10M	5%	1W
R754	1-219-754-11	CARBON	680K	5%	1/2W
R755	1-219-754-11	CARBON	680K	5%	1/2W
R756	1-220-824-11	CARBON	270K	5%	1/2W
R759	1-218-754-11	METAL CHIP	120K	0.50%	1/10W
R776	1-216-049-91	RES,CHIP	1K	5%	1/10W
R777	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R778	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R779	1-216-049-91	RES,CHIP	1K	5%	1/10W
R784	1-216-081-00	RES,CHIP	22K	5%	1/10W
R900	1-216-399-00	METAL OXIDE	6.8	5%	3W F
R901	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R902	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R903	1-216-073-00	RES,CHIP	10K	5%	1/10W
R904	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R905	1-216-025-91	RES,CHIP	100	5%	1/10W
R906	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R907	1-216-025-91	RES,CHIP	100	5%	1/10W
R908	1-216-091-00	RES,CHIP	56K	5%	1/10W
R909	1-216-689-11	RES,CHIP	39K	5%	1/10W
R910	1-216-073-00	RES,CHIP	10K	5%	1/10W
R911	1-216-049-91	RES,CHIP	1K	5%	1/10W
R912	1-218-772-11	METAL CHIP	680K	0.50%	1/10W
R913	1-219-748-11	CARBON	4.7K	5%	1/2W
R914	1-219-510-11	CARBON	470K	5%	1/2W
R915	1-249-437-11	CARBON	47K	5%	1/4W
R916	1-249-429-11	CARBON	10K	5%	1/4W
R917	1-216-073-00	RES,CHIP	10K	5%	1/10W
R918	1-216-097-91	RES,CHIP	100K	5%	1/10W
R919	1-216-025-91	RES,CHIP	100	5%	1/10W
R920	1-249-401-11	CARBON	47	5%	1/4W F

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R921	1-216-668-11	METAL CHIP	5.1K	0.50%	1/10W
R922	1-216-041-00	RES,CHIP	470	5%	1/10W
R923	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R924	1-249-397-11	CARBON	22	5%	1/4W F
R925	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R926	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R927	1-216-073-00	RES,CHIP	10K	5%	1/10W
R928	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R929	1-216-033-00	RES,CHIP	220	5%	1/10W
R930	1-216-033-00	RES,CHIP	220	5%	1/10W
R933	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R934	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R937	1-219-727-11	METAL	68	5%	10W
R940	1-249-393-11	CARBON	10	5%	1/4W F
R941	1-216-073-00	RES,CHIP	10K	5%	1/10W
R980	1-216-049-91	RES,CHIP	1K	5%	1/10W
R981	1-216-025-91	RES,CHIP	100	5%	1/10W
R1001	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1003	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1004	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1005	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1006	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1007	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1009	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1011	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1012	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1013	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1014	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1015	1-216-295-91	SHORT	0		
R1016	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1017	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R1020	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1021	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1022	1-216-295-91	SHORT	0		
R1023	1-216-295-91	SHORT	0		
R1024	1-216-295-91	SHORT	0		
R1025	1-249-389-11	CARBON	4.7	5%	1/4W F
R1026	1-249-389-11	CARBON	4.7	5%	1/4W F
R1027	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R1028	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1501	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R1502	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1503	1-216-125-00	RES,CHIP	1.5M	5%	1/10W
R1504	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1513	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1514	1-216-049-91	RES,CHIP	1K	5%	1/10W

<RELAY>

RY501	1-755-137-11	RELAY

<SPARK GAP>

SG701	1-519-422-11	GAP, SPARK
SG702	1-519-422-11	GAP, SPARK
SG901	1-517-499-21	GAP, SPARK

<TRANSFORMER>

T501	1-429-303-21	TRANSFORMER, FERRITE (HDT)
T502	1-416-401-11	INDUCTOR 0UH
T503	1-431-413-11	TRANSFORMER, FERRITE (HST)
T504	1-416-257-11	INDUCTOR 0UH
T701	1-431-414-11	TRANSFORMER, FERRITE (DFT)
T901	1-416-402-11	INDUCTOR 0UH
T902 ⚠	X-4035-170-1	TRANSFORMER ASSY, FLYBACK (NX-4142//J1D4)

<THERMISTOR>

TH501	1-807-796-11	THERMISTOR
TH502	1-807-796-11	THERMISTOR

<CRYSTAL>

X001	1-567-781-61	VIBRATOR, CRYSTAL

****

*	8-933-283-00	H BOARD, COMPLETE

****

<CAPACITOR>

C805	1-124-589-11	ELECT	47MF	20%	16V
C811	1-124-589-11	ELECT	47MF	20%	16V

<CONNECTOR>

CN801*	1-564-526-11	PLUG, CONNECTOR 11P

<DIODE>

D820	8-719-064-11	DIODE SPR-325MVW

<TRANSISTOR>

Q801	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q802	8-729-119-78	TRANSISTOR 2SC2785-HFE

<RESISTOR>

R801	1-215-433-00	METAL	3.3K	1%	1/4W
R802	1-215-409-00	METAL	330	1%	1/4W
R803	1-215-409-00	METAL	330	1%	1/4W
R804	1-215-413-00	METAL	470	1%	1/4W
R805	1-215-413-00	METAL	470	1%	1/4W
R806	1-215-417-00	METAL	680	1%	1/4W
R807	1-215-421-00	METAL	1K	1%	1/4W

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The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
R808	1-215-421-00	METAL	1K	1%	1/4W
R809	1-215-429-00	METAL	2.2K	1%	1/4W
R810	1-215-433-00	METAL	3.3K	1%	1/4W
R814	1-249-429-11	CARBON	10K	5%	1/4W
R815	1-249-429-11	CARBON	10K	5%	1/4W
R818	1-215-445-00	METAL	10K	1%	1/4W
R819	1-249-441-11	CARBON	100K	5%	1/4W
R826	1-249-408-11	CARBON	180	5%	1/4W
R827	1-249-407-11	CARBON	150	5%	1/4W
		<SWITCH>			
S802	1-692-431-21	SWITCH, TACTILE (CONT+)			
S803	1-692-431-21	SWITCH, TACTILE (CONT-)			
S804	1-692-431-21	SWITCH, TACTILE (MENU)			
S805	1-692-431-21	SWITCH, TACTILE (BRT+)			
S806	1-692-431-21	SWITCH, TACTILE (BRT-)			
S818	1-692-431-21	SWITCH, TACTILE (ASC)			
S820	1-692-431-21	SWITCH, TACTILE (RESET)			
		<THERMISTOR>			
TH801	1-807-796-11	THERMISTOR			
**********					
*	8-933-279-00	J BOARD, COMPLETE			
		**********			
		<CONNECTOR>			
CN891*	1-691-961-11	PIN, CONNECTOR (PC BOARD) 2P			
		<SWITCH>			
S891 ⚠	1-571-433-31	SWITCH, PUSH (AC POWER)			
**********					
*	8-933-263-00	L BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C5002	1-126-964-11	ELECT	10MF	20%	50V
C5003	1-126-933-11	ELECT	100MF	20%	16V
C5004	1-104-664-11	ELECT	47MF	20%	25V
C5005	1-104-664-11	ELECT	47MF	20%	25V
C5008	1-104-664-11	ELECT	47MF	20%	25V
C5009	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5101	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5103	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5104	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5105	1-104-664-11	ELECT	47MF	20%	25V
C5106	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5107	1-137-399-11	FILM	0.1MF	5%	50V
C5108	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5109	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5110	1-104-664-11	ELECT	47MF	20%	25V
C5111	1-137-399-11	FILM	0.1MF	5%	50V
C5201	1-104-664-11	ELECT	47MF	20%	25V
C5202	1-104-664-11	ELECT	47MF	20%	25V
C5203	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5204	1-137-399-11	FILM	0.1MF	5%	50V
C5205	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C5206	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5301	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5303	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5304	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5305	1-104-664-11	ELECT	47MF	20%	25V
C5306	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5307	1-137-399-11	FILM	0.1MF	5%	50V
C5308	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5309	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5310	1-104-664-11	ELECT	47MF	20%	25V
C5311	1-137-399-11	FILM	0.1MF	5%	50V
C5401	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5403	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C5404	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5405	1-104-664-11	ELECT	47MF	20%	25V
C5406	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5407	1-137-399-11	FILM	0.1MF	5%	50V
C5408	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C5409	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5410	1-104-664-11	ELECT	47MF	20%	25V
C5412	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5501	1-126-923-11	ELECT	220MF	20%	10V
		<CONNECTOR>			
CN5001*	1-564-512-11	PLUG, CONNECTOR 9P			
CN5002*	1-564-509-11	PLUG, CONNECTOR 6P			
CN5003	1-564-513-11	PLUG, CONNECTOR 10P			
CN5004*	1-564-507-11	PLUG, CONNECTOR 4P			
		<DIODE>			
D5002	8-719-801-78	DIODE 1SS184			
D5101	8-719-800-76	DIODE 1SS226			
D5103	8-719-800-76	DIODE 1SS226			
D5201	8-719-800-76	DIODE 1SS226			
D5301	8-719-800-76	DIODE 1SS226			
D5303	8-719-800-76	DIODE 1SS226			
D5401	8-719-800-76	DIODE 1SS226			
D5403	8-719-800-76	DIODE 1SS226			
D5501	8-719-976-96	ZENER DIODE DTZ4.7C			

L

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<SENSOR>			
GS5001	*1-475-351-11	SENSOR UNIT, MAGNETIC			
		<IC>			
IC5101	8-759-822-38	IC LA6510			
IC5201	8-759-803-42	IC LA6500-FA			
IC5301	8-759-822-38	IC LA6510			
IC5401	8-759-822-38	IC LA6510			
		<RESISTOR>			
R5001	1-249-383-11	CARBON	1.5	5%	1/4W F
R5003	1-216-295-91	SHORT	0		
R5005	1-216-689-11	RES,CHIP	39K	5%	1/10W
R5006	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5007	1-216-049-91	RES,CHIP	1K	5%	1/10W
R5008	1-216-295-91	SHORT	0		
R5009	1-216-295-91	SHORT	0		
R5010	1-216-295-91	SHORT	0		
R5011	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5012	1-216-295-91	SHORT	0		
R5013	1-216-295-91	SHORT	0		
R5015	1-216-049-91	RES,CHIP	1K	5%	1/10W
R5101	1-249-383-11	CARBON	1.5	5%	1/4W F
R5102	1-249-383-11	CARBON	1.5	5%	1/4W F
R5108	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5109	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5110	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5111	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5112	1-249-383-11	CARBON	1.5	5%	1/4W F
R5113	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5114	1-249-441-11	CARBON	100K	5%	1/4W F
R5115	1-215-882-00	METAL OXIDE	22	5%	2W F
R5116	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5117	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5119	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5120	1-249-383-11	CARBON	1.5	5%	1/4W F
R5121	1-249-441-11	CARBON	100K	5%	1/4W F
R5122	1-215-882-00	METAL OXIDE	22	5%	2W F
R5201	1-249-383-11	CARBON	1.5	5%	1/4W F
R5202	1-249-383-11	CARBON	1.5	5%	1/4W F
R5203	1-249-383-11	CARBON	1.5	5%	1/4W F
R5204	1-249-441-11	CARBON	100K	5%	1/4W F
R5205	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5206	1-215-859-00	METAL OXIDE	22	5%	1W F
R5207	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5208	1-216-670-11	METAL CHIP	6.2K	0.50%	1/10W
R5301	1-249-383-11	CARBON	1.5	5%	1/4W F
R5302	1-249-383-11	CARBON	1.5	5%	1/4W F
R5308	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5309	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5310	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5311	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5312	1-249-383-11	CARBON	1.5	5%	1/4W F
R5313	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5314	1-249-441-11	CARBON	100K	5%	1/4W F
R5315	1-215-882-00	METAL OXIDE	22	5%	2W F
R5316	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5317	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5319	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5320	1-249-383-11	CARBON	1.5	5%	1/4W F
R5321	1-249-441-11	CARBON	100K	5%	1/4W F
R5322	1-215-882-00	METAL OXIDE	22	5%	2W F
R5401	1-249-383-11	CARBON	1.5	5%	1/4W F
R5402	1-249-383-11	CARBON	1.5	5%	1/4W F
R5406	1-216-689-11	RES,CHIP	39K	5%	1/10W
R5407	1-216-079-00	RES,CHIP	18K	5%	1/10W
R5408	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5409	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5410	1-216-089-91	RES,CHIP	47K	5%	1/10W
R5411	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5412	1-249-383-11	CARBON	1.5	5%	1/4W F
R5413	1-216-097-91	RES,CHIP	100K	5%	1/10W
R5414	1-249-441-11	CARBON	100K	5%	1/4W F
R5415	1-215-886-11	METAL OXIDE	100	5%	2W F
R5416	1-216-077-00	RES,CHIP	15K	5%	1/10W
R5417	1-216-308-00	RES,CHIP	4.7	5%	1/10W
R5419	1-216-089-91	RES,CHIP	47K	5%	1/10W
R5420	1-249-383-11	CARBON	1.5	5%	1/4W F
R5421	1-249-441-11	CARBON	100K	5%	1/4W F
R5422	1-215-885-00	METAL OXIDE	68	5%	2W F
R5423	1-216-105-91	RES,CHIP	220K	5%	1/10W
R5501	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R5502	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R5503	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R5504	1-216-093-00	RES,CHIP	68K	5%	1/10W
R5505	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R5506	1-216-670-11	METAL CHIP	6.2K	0.50%	1/10W

9-978-610-01

English
98AL05035-1
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6558-03N/03S/43N/43S

SERVICE MANUAL

COLOR MONITOR

IBM®

6558-03N/43N

US Model
Canadian Model
AEP Model
Japan Model

6558-03S/43S

S. Hemisphere Model

CORRECTION-1

File this correction with the service manual.

SUBJECT : CORRECTION OF DIFFERENT COLOR PARTS MISSING FROM PARTS LIST.

☛: Indicates corrected portion

SECTION 6 EXPLODED VIEWS (See page 6-2 and 6-3)

Incorrect				Correct			
REF.NO.	**PART NO.**	**DESCRIPTION**	**REMARK**	**REF.NO.**	**PART NO.**	**DESCRIPTION**	**REMARK**
63	* 4-061-603-31	COVER, BOTTOM		63	* 4-061-603-31	COVER, BOTTOM (03N/03S)	
				63	* 4-061-603-51	COVER, BOTTOM (43N/43S)	☛
66	X-4035-384-1	STAND ASSY		66	X-4035-384-1	STAND ASSY (03N/03S)	
				66	X-4035-590-2	STAND ASSY (43N/43S)	☛
107	1-783-247-11	CABLE ASSY		107	1-783-247-11	CABLE ASSY (03N/03S)	
				107	1-783-250-11	CABLE ASSY (43N/43S)	☛

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